# THE MADRAS CHRISTIAN COLLEGE MAGAZINE.

## FEBRUARY, 1886.


### *THE MIRACLES OF CHRIST.*

The English word miracle—from the Latin *miraculum,* properly an adjective meaning wonderful—is not perhaps the most fitting word to express the true significance of those works of Christ, which in the New Testament are described under no less than three distinct terms.

It brings into too great prominence an aspect of them which is of secondary importance; it takes note of that element which they have in common with marvels of every kind, power to produce astonishment, and leaves the fact of their proper ethical and spiritual purpose almost unsuggested. The three New Testament terms are "signs,", "wonders" and "powers" or "mighty works," and it is significant that while the words "signs" or "mighty works" occur by themselves, in describing the miracles, the word "wonders" is never found alone but always in conjunction with one of the other names.

These terms express a threefold aspect of the Christian miracles. They are referred to as "signs," inasmuch as they are intended to exhibit more than meets the eye, to draw attention not so much to themselves as wonderful works, as to a truth or truths in the moral or spiritual sphere which they set forth. Under this designation their higher purpose is most prominently

indicated as it is the least in "wonders" or "miracles." Their value likewise as capable of being evidences or witnesses to the authority of the doer of them is recognised. The word reminds us that the Christian miracles are more than wonders; "they are signs and pledges of something more than and beyond themselves; valuable not so much for what they are, as for what they indicate of the grace and power of the doer or of the connection in which he stands with a higher world." (Trench.)

In calling them "wonders" the Scriptures designate the cause by one of its unvarying and most apparent effects. The amazement and astonishment which filled the minds of the beholders are transferred to the work which produced it. The word does not describe the true end of the work which was not to excite their sense of the wonderful, but through that feeling forcibly aroused to arrest the attention of the onlookers, particularly to impress them with the sense of the near presence and power of God. Or, in the familiar figure, when God works a miracle he rings the bell of the universe in order that men may be startled "from the dull dream of a sense-bound existence" to receive the spiritual message which it announces or introduces. In the designation "powers" or "mighty works," the cause or source of the action gives the name to the action, a process of naming the reverse of the latter. The feature that is prominent under these latter terms is the super-human power by which alone such miracles could be wrought; by a natural transition they have come to be used for the individual acts in which the divine energy or agency which they properly designate manifests itself. Combining the ideas in the three names we have the threefold aspect of miracle which the scripture terminology presents. They are striking operations of divine power, calculated to call attention to something that God is doing or is about to do. They are "the finger of God" revealing at once his omnipotence, justice, holiness and mercy.

The question of a true definition has usually occupied a considerable space in the discussion of miracles. Without entering the field against the mass of defective or erroneous writings on this head, we shall content ourselves with the following which appear to be as satisfactory as may be found. "A miracle is an entirely extraordinary phenomenon which cannot be explained from the course of nature as it is known to us, and must therefore have been brought about by a direct operation of God's almighty will in order to obtain a definite object." (J. J. van Oosterzee.) "Miracles are unique and ex-

traordinary manifestations of Divine power which influence nature in a manner incomprehensible to our empirical knowledge, but always in accordance with some moral or spiritual end." (Th. Christlieb.) The points which must be noted in definitions are, that miracles are acts of God, producing, in the domain of nature, results which the natural order of things would not have brought about, but which when accomplished fall into the order of things without producing disturbance, and that they are ever subservient to the higher ends of His kingdom. It is an inaccuracy to describe them, as is done in Hume's well-known *Essay*, as a violation of the laws of nature. A miracle violates no law of nature but merely introduces into the domain of nature a new agent with new powers, working results which, though new it may be to human experience, leave the laws of nature intact. The case is partially analogous to that of the familiar illustration of a stone being thrown upwards by some one. The law of gravitation appears to be violated here, since the stone rises while the tendency of the force of gravity is to draw it earthwards. This result would undoubtedly take place if it were acting alone, but in the present instance the operation of the force is for the time being superseded by the action of a new power. The law, however, is not violated. So in a similar way of miracles: "*non pugnant contra naturam, sed contra nobis cognitam naturam.*" (Augustine).*

At this point, in a larger discourse than is contemplated at present, it would fall to our duty to show that, only on the supposition of abstract atheism or pantheism can it be maintained, as some allege, that miracles are impossible; but that granted the existence of God as a personal being who transcends as he created all things, they are not only possible, but credible, and neither inconsistent with the the order of nature nor incapable of being referred to, and so connected with God.

We shall turn rather in the remaining paragraphs to a consideration of the place held by the miracles of our Lord in the New Testament history and in Apologetic. The miracles of our Lord have long been held to be an important part of the evidence for the divine origin and authority of Christianity. It has been the custom to find in them one of the chief supports and proofs of its truth and the explanation, in great measure, of its early successes. Of recent years, however, a change may be observed to have occurred in the

* They do not conflict with nature, but merely with nature as known to us.

standpoint from which they are viewed and in the manner in which they are presented in Christian apologetic. This change of front is deplored by some, who maintain that the argument from miracles "must still take rank as a leading proof" of the truth of Christianity, (Cairns.) While others consider it is "to be welcomed rather than deprecated." (Fairbairn.) The change referred to is in the direction of insisting less on the miracles of Jesus as his credentials, and as proofs of a faith that is essentially greater and higher than the transitory and sensuous acts. "Truth," it is argued, "is above time; like God it can never grow old or become local and irrelevant; but miracles have at best only an occasional value, become less significant and credible by distance, grow strange to the intellect as they grow remote from experience. The claims of truth on belief increase with time, but those of miracles decrease." A radical opposition is felt to lie between the proof and the thing to be proved, so that though they are allowed to be means through which Christ is revealed, they can never be regarded as proofs of his divinity and authority. This position of the new apologetic is almost an inversion of the old, and is well expressed in its familiar axiom, —we believe the miracles because we believe in Christ, we do not believe in Christ because we believe the miracles. The older apologists in treating of the relation of miracles to Christ viewed them almost exclusively as being his credentials, a position which Christ himself implicitly disowns. The change referred to is an attempt at a readjustment of the question of the relation of these works to Christ, which may be expressed as being from the standpoint of looking at the miracles through Christ instead of, as formerly, looking at Christ through the miracles.

Though primarily the result of theological activity, the change may have been partly hastened, as it was called for, by a corresponding change that has come over the spirit of the age. The age has shown itself to be somewhat slow to yield to evidence that lies mainly in the wonderful. Mind is less credulous now, than in former days, and a miracle is no longer recognised as in itself a proof of doctrine or the guarantee of the authority of its worker. The miracle may not be discredited, or be considered an impossibility or as necessarily a stumbling-block to faith. It may even be admitted, when properly attested, as capable of being a valuable out-work of the Christian citadel, yet the disposition is to ignore them as defences. The cry is for a fortress strong enough to withstand the assaults of unbelief without reliance on the opposition which these

might be expected to offer to the march of her assailants. And this is answered by the presentation of Christ as the object of faith, for His own sake, and for His truth's sake, and not for His works.

This has the appearance of abandoning a legitimate source of proof, yet the argument if not stated with recklessness is stronger and more acceptable than the older form. It will generally be allowed that the power to work miracles could never be sufficient to support such claims as Jesus made, or prove Him to be such as we hold Him to be. On the other hand few will refuse to accept the proposition that "Christ once conceived to be the extraordinary person we believe Him to be, miracles become to Him natural and necessary." The conclusion, therefore seems to be suggested that since the miracles can only be a subsidiary proof it is better, instead of presenting them as the credentials which Christ offered to the world, by which his authority and divine origin was to be authenticated, to look at them in the way in which his own saying about them indicates. "The works that I do, they bear witness of me." Their value as proofs will not be lessened but increased. They will become, as they truly are, a series of great symbolic acts.

They will no longer stand out in his life as merely isolated deeds of wonder which he performed, manifesting his possession of extraordinary powers, but they will rather appear as the natural witnesses to his Being and His mission on earth, the natural outflow of the fullness which dwelt in Him, "symbols of the reality He is, the appropriate expressions of the force he embodies, completing the picture of Divine goodness he manifests, showing that its action in the physical is in essential harmony with its action in the moral sphere." The miracles are miracles only relatively to us; relatively to Christ they are most natural. The real question, therefore, about the possibility and credibility of the miracles of our Lord, as well as about their true interpretation and position, is finally involved in the question of His own personality. Indeed if we would understand them truly we must start from a true conception of Himself. This method of enquiry will present us at the outset with the greatest of all the miracles, His own being. He is a new beginning in the world. He is not the product of natural causes and effects; not merely a new starting point in History; not merely an extraordinary religious genius whose coming brought a new impulse into the world's life. He is a break in the order of nature. In Him we see the realisation of the Divine Love of God, in its intervention in the world's history for the redemption of the race.

So that on one side while his appearance is a great interruption of the order of nature, the new element which he introduced into it by his coming works not for its disturbance but for the restoration of its harmony, broken as it has been by the fall. His miracles will be seen to bear the stamp of His character, and exhibit the nature of his mission and work. They were not mere displays of power before an astonished multitude; though often asked by the restless and unbelieving Jews to show them a "sign" by the performance of some work of wonder, he steadily refused to be a mere miracle-worker, to satisfy in that way an idle curiosity or careless unbelief. In this characteristic he is separated essentially far from the ancient magicians who have sometimes been compared with him. In the works of Jesus there is no scenic display, intended to exhibit his supernatural skill and strike awe into the minds of the beholders, but far otherwise. The calmness, the holiness, and the benevolence of his nature pass into all his works. The same graciousness and sobriety mark his works, as characterise his words. Indeed, they are so intertwined,—they so combine to give expression to His character as a whole, that it is a great mistake to think of the one to the perfect exclusion of the other.

Further, His miracles are eminently symbolic of the spiritual work He came to do. Here, in as great measure as in the former case, does the close connection between His teaching and His activity manifest itself. His works not only illustrate his words, but are themselves visible discourses. He goes about doing good, and people flock to Him not only because they found in Him one who "spoke as never man spoke," but in Him also one before whose touch sickness and pain, sorrow and even death disappeared. He came to redeem the world from its sin, not to condemn it. On all sides were visible in every department of experience the sad fruits of its sin in the misery and pain and confusion which abounded. "The misery of the world is the shadow of its sin." The physical, as it is the result is likewise the type of the moral blight that has passed over the earth. What splendid opportunities thus lay in the sicknesses and the sorrows amid which his ministry was cast, to give forth by works of healing and tenderness in a way more impressive than words could tell it, how he was the Redeemer, the Saviour of mankind—Himself taking our infirmities and bearing our sicknesses. This was clearly a leading purpose of His miracles. This purpose, the unbelieving Pharisees refused to own,

ascribing the spring of his works of healing the possessed, to a connection between Him and the powers of Darkness. Never did the opposition and malice of his enemies meet with a more scathing exposure. Their insinuations are brought to the light of Truth in which their hideousness is revealed, and having repelled them with scorn, be declares in unmistakeable words that there is but one conclusion to which an unbiassed mind can come in regard to these works of healing, *viz.*, that they make it manifest that "The Kingdom of God is come." (Matt, xii. 24-30.)

One motive lay at the root of his speech and of his action, and both spring from the same source of love that moved Him to take the human nature, that He might live for us and give up His life for us too, that sin and death might for us be overcome.

Summing up therefore what these paragraphs contain, we might state the substance of them in the form of a threefold answer to the question,—why did Jesus employ this method of working? To which first of all it might be replied, that they were among the accredited proofs of a divine commission, secondly, they were the natural expression and operation of the divine fulness that dwelt in Him and thirdly, they were striking symbols of his Messianic work. He never wrought miracles for Himself, either for His own glory or His well-being. Never does he make a useless display of power. A divine and beneficent purpose underlies them all. Does he cure the bodily disease, he would in the act intimate His readiness and power to heal the spiritual sickness. He raised the dead and thereby pointed to the deeply comforting truth that he was the Resurrection and the Life.

His spirit and the spirit of his office are breathed into them—they speak of His gracious disposition towards us and are the undying emblems of His work of restoration and regeneration.

We have but touched the fringe of this great theme, contenting ourselves with suggesting rather than with indicating in detail the method of viewing these works of our Lord which appears to give to them at once a truer meaning and a more natural place. Looked at through Him and interpreted not as credentials which he offered to men but as works in which he exercised the supernatural powers he had naturally and in the line of His Messianic office, a deeper meaning attaches to them, and they become not weaker but stronger arguments for His Divinity and Authority.

J. Colville Peattie.

## MODERN UTILITARIANISM.

Utilitarianism seems evidently to be the popular philosophy of the day. Most of the living ethical writers in England are more inclined to support utilitarianism than intuitionism; and it is a fact worthy of notice that the two great English Universities—Oxford and Cambridge—have both utilitarians as their recognized leaders of philosophic thought. Prof. Fowler's latest work, "Progressive Morality," is a popular exposition of utilitarianism, and Professor Henry Sidgwick's famous work, "The Methods of Ethics," also supports the more popular ethical theory. We should not, however, attach much value to this fact; for ages like individuals have their peculiar tastes. During nearly the whole of the seventeenth century, intuitionism was very popular; and it was only during the latter part of the 18th century that the reaction in favour of the rival theory set in. The popularity of utilitarianism is at its height at the present time; but we shall not be surprised to see another reaction setting in in favour of the older theory soon. Nothing is absolutely true in this world; still less can we expect a particular philosophical opinion to be accepted as universally true. In philosophy more than in any other subject rival theories share the truth between them; and hence we should be thankful for every effort to shew each theory in its best light. But notwithstanding the increasing popularity of utilitarianism, it seems to me that the new philosophy has far greater difficulties to contend with than the rival system; and my object in this paper is to shew some of the defects and difficulties of utilitarianism which have not been satisfactorily cleared.

By modern utilitarianism I mean the system of philosophy so ably expounded by Mr. John Stuart Mill. Prof. Henry Sidgwick gives a very clear definition of utilitarianism:—"By utilitarianism is meant the ethical theory, that the conduct which, under any given circumstances, is objectively right, is that which will produce the greatest amount of happiness on the whole; that is taking into account all whose happiness is affected by the conduct."* The following two quotations taken from Mr. Mill's excellent little work on utilitarianism also state the new ethical theory very clearly: "The creed which accepts, as the foundation of morality, utility,

* *Methods of Ethics*, page 407.

holds that actions are right in proportion as they tend to produce happiness, wrong as they tend to produce the reverse of happiness. By happiness is intended pleasure and the absence of pain, by unhappiness, pain and the privation of pleasure."* Again, speaking of the ultimate end of life, he writes as follows:—"The utilitarian theory of life is that pleasure and freedom from pain are the only things desirable as ends: and that all desirable things (which are as numerous in the utilitarian, as in any other scheme) are desirable either for the pleasure inherent in themselves, or as means, to the promotion of pleasure, and the prevention of pain." From these passages, it is quite evident, (1) that Mr. Mill regards conduciveness to pleasure as the sole standard of right and wrong, and (2) that he attaches no value to motives but takes into consideration only the consequences of actions.

It will be useful here to notice in what respects Mr. Mill's utilitarianism differs from that of Paley and Bentham. Paley may be regarded as the founder of utilitarianism in England; but Paley's system has undergone several transformations in the hands of Mr. Mill. The latter in fact has entirely remodelled the 'old utilitarianism' of Paley and Bentham, so much so that Mr. John Grote terms the new system neo-utilitarianism. There are three points in which Mr. Mill's utilitarianism differs from the old utilitarianism. Mr. Mill lays great stress on the quality as distinguished from the quantity of pleasure. Mr. Mill admits clearly that pleasures, when we estimate them for the purpose of guiding action, ought to be considered as varying in kind as well as in intensity and duration. Bentham, of course, did not quite ignore the kind or quality of pleasure; but he evidently made the estimation of pleasures by their kind or quality entirely dependent on the "elements or dimensions of the value of pleasure," which he brought under six heads, *viz.*, intensity, duration, propinquity, fecundity, certainty and purity. Mr. Mill attaches a good deal of value to what is known as the social feeling in man and the good example set by Mr. Mill has been followed by other utilitarians. Mr. George Grote, for instance, speaking of the elementary tendencies of the mind out of which our ethical sentiments are developed, lays great stress on what he calls our primitive sympathetic tendencies.† It fact the ethical sentiment, according to this writer, is nothing but a social sentiment. Prof. Bain, who has been following very nearly in the footsteps of Mr. George Grote, also

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* *Util.* p. 9. † *Fragments on Ethical and Moral subjects*, p. 6.

admits the existence of disinterested benevolence and does not even admit that it can be explained away by his favourite theory of association.* But to return to Mr. Mill, we find him just as enthusiastic as his followers in asserting the existence of the social feeling in man. There is a striking passage in his *Utilitarianism* to the effect that social feeling is to be regarded as the ultimate standard of morality :—

"The deeply rooted conception which each individual even now has of himself as a social being, tends to make him feel it one of his natural wants that there should be harmony between his feelings and aims and those of his fellow-creatures. This feeling in most individuals is much inferior in strength to their selfish feelings and is often wanting altogether. But to those who have it, it possesses all the characters of a natural feeling. It does not present itself to the mind as a superstition of education, or a law despotically imposed by the power of society, but as an attribute which it would not be well for them to be without. This conviction is the ultimate sanction of the greatest happiness morality." †

Paley on the other hand flatly denies the existence of social feelings. Even Bentham speaks rather sarcastically of the "principle of Sympathy and Antipathy, which approves and disapproves merely because a man feels himself disposed to do so, and holds up that approbation as a sufficient reason for action in itself." Nowhere does he regard disinterested sentiment as arising from any disposition to pure self-sacrifice, and far less does he look on sympathy and goodwill as the ultimate sanction of morality. "With Bentham," writes Mr. Leslie Stephen, "the altruistic impulses are still scarcely admitted, as he contemplates society as a mere aggregate of jostling individuals."‡ Mr. Mill, therefore, by attaching so much value to the social element, unconsciously goes over from the camp of Epicurus to that of the Stoic.

The third point of difference between Mr. Mill, and his predecessors consists in the weight which the former attaches to traditional morality. Bentham may be regarded as a sort of ethical Bacon. According to his view past generations had contributed little or nothing to ethical study. They had built their theories on false principles and mankind had everything to learn anew in utilitarianism. Mr. Mill, however, is a little more modest. He does not totally reject the collective experience of Mankind.

"During all that time (the whole past duration of the human race) men have

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* *Mental and Moral Science*, p. 432. Prof. Bain seems to me, however, to be a little inconsistent when after speaking of the existence of pure disinterested benevolence in man,. (p. 432.) he afterwards explains it away as due to the operation of Fixed Ideas. (p. 442).

† *Util.* p. 49. ‡ *Eng. Thought in the 18th Century*. Vol. 2, p. 127.

been learning by experience the tendencies of action. On any hypothesis short of universal idiocy, mankind must by this time have acquired positive beliefs as to the effects of some actions on their happiness: and the beliefs which have thus come down are the rules of morality for the multitude, and for the philosopher, until he has succeeded in finding something better."

There is not the slightest doubt that Mr. Mill has improved considerably on the old utilitarianism of Paley and Bentham; but it is not difficult to see that these very improvements have laid open the system to fresh attacks. Modern utilitarianism has certainly far greater difficulties to contend with than old utilitarianism. In the first place the most obvious objection to the utilitarian theory arises from the difficulty of determining what happiness is. We will not of course go so far as Carlyle went and ask what right has man to be happy? But we are justified in requiring a satisfactory answer to the question:—In what does happiness consist? This objection, I know, is a very old one and may be set aside as being a little stale; but it is the more forcible for the very reason that it is an old objection and is left still unanswered. We do not make matters clearer by saying that "happiness is the utmost pleasure we are capable of." The late Mr. Green has brought out the objection in a masterly manner:—

"Happiness 'in its full extent,' as 'the utmost pleasure we are capable of' is an unreal abstraction if ever there was one. It is curious that those who are most forward to deny the reality of universals in that sense in which they are the condition of all reality *viz.*, as relations, should yet, having pronounced these to be mere names, be found ascribing reality to a universal, which, cannot without contradiction, be supposed more than a name. Does this happiness in its full extent mean the aggregate of possible enjoyments of which modern utilitarians tell us? Such a phrase simply represents the vain attempts to get a definite by addition of indefinites. It has no more meaning than the 'greatest possible quantity of time' would have. Pleasant feelings are not quantities that can be added. Each is over before the next begins, and the man who has been pleased a million times is not really better off—has no more of the supposed chief good in possession—than the man who has been only a thousand times. When we speak of pleasure, then, as forming a possible whole we cannnot mean pleasures as feelings."

The utilitarians must, certainly, provide us with a definite view of happiness before they look upon it as the sole standard of right actions; but among utilitarians there is hardly any unanimity of opinion as regards the nature of happiness. Mr. Mill himself is very vague in his treatment of the subject. At one time he identifies it with pleasure; at another time with contentment,—a happy life is a satisfied one. He also makes mental cultivation one of

the chief elements of happiness? Again if happiness is conceived differently by different individuals, then comes the question—whose view of happiness should be regarded as correct and should be taken as the standard of rational conduct? Mr. Mill comes with his higher and lower pleasures. The intellectual pleasures are higher and the testimony or opinion of the person who has tried both should be considered as true. "Now it is an unquestionable fact," writes Mr. Mill, "that those who are equally acquainted with and equally capable of appreciating and enjoying both, do give a most marked preference to the manner of existence which employs their higher faculties."* And as intellectual men have enjoyed both these pleasures their testimony is therefore correct. A little consideration, however, will shew that the opinion of an intellectual person is as liable to be biased as that of an ordinary person who has only tasted sensual pleasures. The moment a person acquires intellectual tastes, he at once becomes indifferent to sensual pleasures. It is a well-known psychological law that Knowledge and Feeling, though co-existent, are always tending to exclude each other. Comparison is only possible where there is impartiality. Does not a man, who is much absorbed in some intellectual occupation, or in spiritual ecstasy, or in the furtherance of some religious or political ideal, or even in the pursuit of his own reputation, become utterly careless of his surroundings and indifferent to physical and social enjoyment? Hence we can no more look upon the intellectual being as our guide in this matter than we can one who is addicted to mere sensual pleasures.

Intuitionists have often been blamed for making too many assumptions; but the very same charge can also be brought against the utilitarians. One of their assumptions, to quote the words of Prof. Sidgwick, is "that all pleasures included in our calculation are capable of being compared quantitatively with one another and with all pains; that every such feeling has a certain intensive quantity, positive or negative (or, perhaps, zero) in respect of its desirableness, and that this quantity may be to some extent known: so that each may be at least roughly weighed in ideal scales against any other."†

The above assumption is involved in the very notion of maximum happiness, and the learned Professor adds pertinently: "whatever weight is attached to the objections brought against this assumption must of course tell against the present method."‡ Utilitarians

* *Util* p. 12. † *Methods of Ethics.* p. 409. ‡ *Ibid.* p. 410.

themselves find the greatest difficulty in framing a scale of pleasures; and the task is made more impracticable by their introducing quality in pleasure as distinguished from quantity as an important element. Even granting that difference of quantity can be measured, we are incapable of measuring the quality of pleasures. "The fact is, two pleasures cannot be tasted with a view to the comparison of them, as a chemist may taste two fluids: the utilitarian is led away by his language, talking as he does about pleasures as if they were separate entities, independent of the mind of the enjoyer of them: the pleasures are always mixed with something from ourselves, which prevents us from speaking, with any philosophically good result, of this sort of independent comparability among them."*

The various other difficulties connected with the question of the distribution of happiness are all noticed by Prof. Sidgwick.† When the utilitarian speaks of the greatest happiness of the greatest number, we naturally ask whom "the greatest number" includes? "Are we to extend our concern to all sentient beings including animals or are we to confine our view to human beings?" That we should extend our concern to all sentient beings is the more popular opinion and is the one held by Bentham and Mr. Mill. "But it must be admitted," says Prof. Sidgwick, "that by giving this extension to the notion, we considerably increase the scientific difficulties of the hedonistic comparison." Practically however, utilitarians have concerned themselves with human beings, assuming that the inferior beings are deficient in sensibility to pleasure. Even limiting our attention to human beings the question becomes complicated when we take into consideration the interests of posterity. Again if utilitarianism directs us to make the number enjoying happiness as great as possible, does it not follow that an increase in numbers brings about a decrease in average happiness? In this case to what extent should we increase the number of those enjoying the consequences of a good action at the risk of diminishing average happiness? Here is a question not easily answered. Though Prof. Sidgwick in his usual masterly manner tries to meet these difficulties, still he cannot help adding that utilitarianism must wear a certain air of absurdity to the view of common sense, "because its show of exactness is grotesquely incongruous with our consciousness of the inevitable inexactness of all such calculations in actual practice."‡

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* Grote's *Examination of Utilitarianism*, p. 33. † *Methods of Ethics*, p. 410.
‡ *Methods of Ethics*, p. 411.

The sphere of utility is certainly wider than the sphere of morality. If utility is the sole criterion of right then all that is useful should be morally right. Good cookery and good music ought to be denominated moral virtues.. Such an objection has been brought forward by Adam Smith, Reid, Stewart, and Brown. Adam Smith thinks it incongruous that we should have no other reason for praising a man than for praising a chest of drawers. Prof. Bain does admit that one of the unguarded points of the utility system is the not pointing out what kinds of utilities ought to come within the sphere of morality.* "The ethical end, although properly confined to utility, is subject to still further limitations, according to the view taken of the province of Moral Government or Authority." Hence, according to Bain, only those utilities that are recognized by Government or Authority ought to come within the sphere of morality. Prof. Bain, as we shall see presently, has fallen into a serious error by introducing the element of authority into his ethical system; suffice it only to say here that by recognizing moral rules as established and enforced among men by the dictation of authority he goes back to Hobbism.

The objection just brought out has certainly not escaped the notice of Prof. Sidgwick. He states it still more clearly. "How, it is asked, if the true ground of the moral goodness or badness of actions lies in their utility or the reverse, can we explain the broad distinction drawn by common sense between the moral and other parts of our nature? Why is the excellence of virtue so strongly felt to be different, not merely in kind, but in degree from the excellence of a machine, a fertile field, or a navigable river?"† The answer may be "that as the *natural* (non-moral) feelings excited in us by human beings are generally very different from those caused by inanimate objects, it is to be expected that our judgment of goodness or badness should be accompanied by different sentiments in the two cases; just as the beauty of a woman affects a man quite differently from the beauty of a landscape." But this answer does not in any way clear the difficulty; it only puts forward another difficulty of the like nature. His second reply is a little more to the point. "Qualities that are, in the strictest sense of the term, virtuous, are always such as we conceive capable of being immediately realized by voluntary effort, at least to some extent." This answer would do very well in the mouth of a Liber-

* *Ment. and Mor. Science*, p. 638. *Ibid*, p. 438. † *Methods of Ethics*, p. 432.

tarian, but Prof. Sidgwick being a Determinist the phrase "voluntary effort" has hardly any meaning.

We may now come to Jouffroy's well-known objection, which has of late been once more ably enforced by Prof. Calderwood. The objection is that utilitarianism is destitute of the element of obligation, which forms an essential distinction of the morality actually believed and practised by the bulk of mankind as exemplified in the expressions 'I ought,' 'I must,' and that, wanting this element, it is necessarily sterile in its practical application. The end, therefore, which utilitarianism proposes cannot be transferred by generalization from the individual to society, and utilitarians, therefore, are guilty of a logical inconsistence in so extending it. "Utilitarianism," says Prof. Calderwood, "meets its last and severest tests in the attempts to distinguish the desirable which is the optional and the dutiful which is the imperative." That happiness is by nature desirable can never constitute a law of personal obligation, for the desirable has power to attract but not to command. Again the desirable may often be the unattainable; but the dutiful is not only the possible but the binding. Utilitarianism, therefore, fails to supply a basis of obligation. But just as Mr. Mill modified the old theory in order to extricate utilitarianism from some obvious difficulties, so a few modern utilitarians have modified still further Mr. Mill's utilitarianism in order to meet the difficulty just brought forward. Mr. George Grote, for instance, brings in the element of authority to account for the notion of moral obligation:—

"If then we enquire what are the fundamental points common to all systems of positive morality, apart from the goodness or badness of any we shall find them to consist in obedience on the part of an individual to commands from without; emanating from an indeterminate superior called the public, real or supposed, whereof the individual himself is a member. The feeling of obligation thus arising is strictly moral obligation: the command exacted is a moral command: the sanction by which it is enforced is a moral sanction, consisting in the idea of approval or condemnation by a public without, concurring with the individual himself."*

Prof. Bain, who has evidently taken the late Mr. George Grote for his philosopher and guide in ethical questions, is still more explicit. Moral rules, according to him, are rules enforced by the dictation of authority. "A moral act is not merely an act tending to reconcile the good of the agent with the good of the whole society; it is an act prescribed by the social authority and render-

* *Fragments on Ethical subjects*, p. 40.

ed obligatory by every citizen. Its morality is constituted by its authoritative prescription."* By introducing the element of authority, Professor Bain totally rejects what is termed optional morality which is in fact far more important than obligatory morality. A man is not generally considered moral if he simply abstains from robbing and murdering, but for his deeds of active benevolence, sympathy, &c. Professor Bain even goes so far as to trace the existence of conscience to the rules of conduct which have been adopted for the preservation of society, from which is generated what is called an ideal avoidance, of such conduct as would be liable to punishment, as contravening these rules. "Authority or punishment is the commencement of that state of mind recognized under the various names of conscience, the moral sense, the sentiment of obligation."† This is going back very nearly to Hobbes' position, that morality is the creation of law. One can easily see to what an absurd length Professor Bain has carried his principle when he himself says:—"A bad law is still a law, an ill-judged moral precept is still a moral precept, felt as such by every loyal citizen."‡ It is true Professor Bain by introducing the authoritative element has supplied a basis of obligation but we cannot help thinking that it is an instance of escaping the frying pan to fall into the fire.

A word about the proof of utilitarianism. Mr. Mill thinks that utilitarianism is based upon a psychological fact which being a first principle hardly needs any proof. The psychological fact is that "human nature is so constituted as to desire nothing which is not either a part of happiness or a means of happiness." Professor Bain follows Mr. Mill when he says:—

> "There can be no proof offered for the position that happiness is the proper end of all human pursuit, the criterion of all right conduct. It is an ultimate or final assumption, to be tested by reference to the individual judgment of mankind.... If then it appears on making the appeal to mankind, that happiness is admitted to be the highest end of all actions, the theory of utility is proved."||

But it has been over and over pointed out that the above is anything but a proof of Universalistic Hedonism. If it is a proof at all it is a proof of Egoistic Hedonism. In the first place even granting that each man seeks his own happiness, it does not follow that each man *ought* to seek his happiness. Secondly what the psychological fact obviously proves is that A seeks his own happiness

* *Ment. and Mor. Science*, p. 456. † Bain's *Emotions and the Will*, p. 481.
‡ *Ment. and Mor. Science*, p. 441. || *Ment and Mor. Science*, p. 441.

B his own happiness and so on; we by no means prove that A *ought* to seek the happiness of *all*. Professor J. B. Mayor states the objection very clearly when he says:—"Mr. Mill's argument is really an instance of the 'fallacy of composition' in which the word *all* is used at one time distributively, at another collectively. Thus each human being, A, B, C, &c., naturally desires his own happiness; but A, B, C, &c., make up all human beings and the happiness of A, B, C &c., make up the happiness of all human beings; therefore every human being naturally desires the happiness of all human beings." *

The fact is, as Professor Sidgwick himself admits, it is impossible to pass from psychological to ethical Hedonism; and if we do at all it must be to the Egoistic phase of the latter. "For clearly from the fact that every one actually seeks his own happiness we cannot conclude, as an immediate and obvious inference, that he ought to seek the happiness of other people."† We can even go a little further and say with Mr. A. J. Balfour:—"A psychological law cannot serve as a rational basis for an ethical system."

We may here sum up in a few words some of the obvious difficulties which one encounters in the utilitarian system. In the first place the whole system has for its foundation a single word, which is after all an unmeaning abstraction; secondly it is based upon a number of assumptions, which even being granted make the question of the calculation and distribution of happiness very complicated; thirdly it does not at all explain the distinction drawn by common sense between the moral and other parts of our nature—the excellence of virtue, for instance, and the excellence of a machine or any useful article; fourthly it does not supply a basis of obligation; lastly the whole system rests upon a psychological fact which has nothing whatever to do with the actual system itself.

S. SATTHIANADHAN.

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## *RAJASEKHARA.* ‡

### CHAPTER I.

*Dhavalagiri—Description of the temple—Rajasekhara sitting in the resthouse on the bank of the Godaveri at early morning—The flatteries of the astrologer and others who resort there—All go together to the Feet of Rama to see the* byragi.

Near Sri Nassakatryambaka, somewhere in the far east, the Godaveri river has her birth in a lofty mountain. Sparkling with the

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* *Exam. of Utilitarianism.*, p. 70. † *Methods of Ethics*, p. 408.

‡ Rajasekhara; or Moonlight of Instruction. Translated from the Telugu of K. Virasalingam, Pandit, by Rev. J. R. Hutchinson, C. B. M. All rights reserved.

scintillations of her rings and wristlets, she meanders along the valleys on the southern slopes of Bhubhrudvara her birthplace, and, tarrying a little, glides from thence gently onward filling the eyes of all beholders with delight. Then, flaunting saucily with sweet indistinct utterances, she runs swift as an arrow and, reaching the mighty trees, flouts the parent roots to dally with their younger off-spring. Again, she plays at hide and seek among the bulrushes; then out and away on her journey through Vidarbha and adjacent countries, refreshing all, be they young or old, and furnishing so abundant a supply of water for drinking and bathing that the fault is theirs alone who, coming that way, refuse to take it. She vivifies and renders fruitful the crops and fruit-trees in every spot where she sets her foot; adorns the whole land on either bank with soft green grass as far as her coolness extends; provides pasturage for vast herds of cattle; welcomes to her embrace the Varada, Manjira, Pinnaganga, and other rivers which hear her coming from afar and rush by many roads to meet her, bearing as tribute fruits of the desert and peacock plumes; views from afar that white mountain in the neighbourhood of Rajahmundry which has attained to celebrity as the richest gem of the Telugu country; and, betraying her depth the more as she comes on and on seeking her husband, rushes melodiously along its base to pay her respects to Janardanaswami* who dwells upon the summit, and immediately stretches out from thence her hands, in the form of two branches, gains the coveted boon, and coyly joins her lord.

This mountain is not of great height; but, being composed of white mica-rock, is a veritable wonder to behold. It is on account of these same rocks that it bears the name Dhavalagiri or White Mountain. On the south side are built stairs of black stone from the base straight up to the brow of the hill. On either side of these extend up the slope, in a line that delights the eye, the dwellings of priests and other disciples of Vishnu. These stairs ascended, there appears upon the summit a small but beautiful temple of black stone. Around this on three sides extends a wall of about the height of a man. On the north side, however, instead of the wall the horn of the mountain itself shoots upward and, affording the walls shelter at its base, towers above them and overlooks the very dome of the temple. Within this enclosure, to the north, is a small cave. The ancients say that when of old the princes of the house

* An epithet of Vishnu.

of Pandu lived as hermits, they sat here and did penance. At the time of our story there was a small stone image in it. On the feast days of this god, which throughout the remainder of the year grows mouldy without offering or adoration, the priest brings it out, cleans it with tamarind water, and places a small lighted lamp in the divine presence. Then, standing in the entrance of the cave, he takes a penny a-head from the crowds of people who come on pilgrimage from the surrounding hamlets, goes inside and worships the god, and dismisses them with the assurance that their ancestors have been blessed. No sooner do the half-dozen nuptial days of Janardanaswami come to an end than the priests place him as usual among the ropes of his car and station the little god as sentry over him. The minor deity, although receiving neither salary nor daily *batta*, moves not a foot, but steadfastly stands guard day and night; while the priests through faith in him live a life free from anxiety or necessity for entering the cave again until next year this ceremony comes round once more. But though irreligious man thus fail to wait upon the god, the little four-footed beasts that guard the mountain pay their pious homage constantly to the deity; and until men return on feast days and commit so great a sin as to drive them out, make their very bed at night on the bare floor of the cave in the presence of the god.

Within the enclosure on the east side, there stands before Janardanaswami a lofty standard. The tiny bells upon its top for ever sway back and fore in the breeze and delight the ear with their sweet music. At the base of the shaft, facing the god with joined hands, stands an image of Anjaneya.* To the north of this stone image and the standard is a nuptial porch. On swami's wedding days they seat the processional images in this porch, and conduct the whole marriage ceremony with the utmost pomp.†

In each fortnight of the month, ‡ on the night of the eleventh day, occurs the praise-service of Vishnu. The Vaishnuvites assume their rosaries of *tulisi* beads,¶ plaster on the twelve perpendicular marks,|| and, fingering their lutes to the braying of cymbals and drums, and shouting with all their might the names of their tutelary

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* The chief of the deified monkeys, and an ally and spy of Rama.

† The marriage of the principal deities is celebrated once a year.

‡ Each lunar month has two *pakshas* or periods of two weeks. The first is called the *sukla* or light, the second, the *krushna* or dark, fortnight.

¶ The sacred basil—*ocymum sanctum*—worshiped by the Hindus.

|| Worn by Vaishnuvites. Three each are drawn with wet ashes of codwung upon the forehead, shoulders, and breast.

deity—"O Butter Thief!"—"O Enjoyer of the Shepherdesses!"—"O Lover of Radthika!"—"O Shepherd Boy!"*—sing the exploits of Krishna, and chew peppers and lumps of sugar between whiles to relieve their hoarse throats. With wagging heads the devotees put forth all their strength and play so hard that frequently the drums and cymbals are broken. It often happens, too, that one or two of the very pious fall into a trance by divine inspiration and lean back upon the pillars behind for several minutes at a time, insensible. To foreigners who do not well understand this mode of devotion their actions at such times seem like the antics of madmen; but as for the people who come to see the show—the more the devotees yell and distort their features, the greater saints they consider them!

If any one but take the trouble for once to climb the hill at mid-day and direct his gaze to the four quarters of the heavens, he will behold a veritable feast for the eyes. Along the mountain side the goats, erect upon their hind legs, nibble the leaves of the bushes, while their variegated kids frolic nimbly before them. To the east and south among a seeming heap of thatched houses towers aloft an occasional tiled roof as in derision of its meaner neighbours. To the north the field watchers shout "Ko! Ko!" from their elevated perches and whirl their slings to frighten the numerous flocks of birds. Of these many varieties rise from the neighbouring *topes* into the sky uttering their sweet calls, and, when opportunity affords, break off the milky heads of the various green crops, and light again upon the branches of the trees to eat. Here, too, the herds of cattle in the meadows nibble the blades of grass between whiles, or wholly stop grazing, and with their calves stand listening—their ears erect, necks outstretched, and hearts melting at the songs of the shepherd boys who sing to the melodious accompaniment of the pipe in the shade of the trees. On the west the rays of the sun falling upon the clear waters of the parent Godaveri, produce diamond glintings in all directions, and many varieties of aquatic birds bob up and down upon the surface like puff-balls as they skim along the surface catching fish.

On the bank of the Godaveri near the base of this mountain the Feet of Rama have come to light neatly imprinted in a black stone slab. Every one believes these to be the prints of the very feet that trod the path near this mountain when of old Sri Rama went to the

* Names drawn from the chief *lila* or pranks of Krishna. Radthika was his aunt and favourite mistress during his residence among the cowherds.

hermitage with Seeta and Laxmina. Pilgrims desirous of visiting the Feet of Rama, journey even from distant countries. Here, near Rama's shrine, they bathe in Mother Godaveri, climb the mountain, and offer fruit and alms to Janardanaswami according to their several ability; or, if they have the means, even make a feast to the god, and then go their way again.

Since they have made this a meritorious shrine, all, without distinction of creed or caste, receive the sour rice, rice and curd, and other substances offered to the god, touch them to their eyes, and eat them on the spot; and as it is a misdemeanour to wash off what sticks to the hands, they paint the pillars and walls of the temple with their palms as high as they can reach, and then polish the backs of their hands and their cloths with what still remains.

For a short distance on the south and east of the hill extends a village. Formerly this village bore the name of the hill itself; but at the present time they call it Dhavalesvaram. Just where the steps leave the hill, on the lower side of the high road, stands the temple of Sri Agastesvara-swami. The local legend says that of old Agastya crushed the pride of the Vindhya mountains and, taking himself off to the south, established this deity here. Between the temple and the hill there extends from east to west as far as the Godaveri a broad highway. At the extremity of this street steps of black stone are built down to the water's edge; and near the steps, to the east of the road, is a building called a choultry. It was originally intended for foreign brahmins and other travellers to pass the night in; but finally came to be used only as a place of idle resort for the leading men of the village, who were in the habit of gathering there daily at morning and evening to spend a little time in gossip.

The Sun on rising one morning decorated himself as usual with his rouge *bottu*, and gilded the tree-tops until he made them gleam as though they had blossomed into golden water. The birds were leaving their nests with loud cries and flying off in all directions in quest of food. The shepherd boy—his lunch tied up in a bundle—was driving his flock of cattle to the green meadows; while behind, the girls, basket in hand, raced one another shouting—"The white cow's dung is mine!" "The dun buffaloe's dung is mine!" The farmers, with goad on shoulder, were driving their plows afield; when a stout middle-aged man wearing his sacred thread after the manner of a necklace and carrying a *chembu* in his hand, came wading to the bank after having washed his feet and hands in the Godaveri. Rinsing his mouth and ejecting the water, he

arranged his sacred cord according to custom on the left shoulder, and came and sat down in the choultry on the bank. Here he proceeded to clean his teeth with a bit of crabstick which he had brought along in his chembu when he came. His age was about forty. Had it not been for the small-pox pits upon it there need have been no hesitation in pronouncing his face handsome. As it was, it was not at all unworthy of the blatant flatteries of those prophets who were always coming to visit him. In stature he was somewhat short and corpulent. His forehead was broad, leading beholders to think him a *pandit*. He had on at that time a cloth of a watery reddish tint. A laced cloth newly washed wound loosely about his head and hung down a little way. Except a small pair of diamond earrings in his ears, a gold ring in the form of a tuft of *darbha* grass,* which, on the ring finger of his right hand witnessed to the fact that he was a strict formalist, and two silver rings on the forefinger, there were no ornaments whatever upon his person. His name was Rajasekhara. By the time he had performed his facial ablutions a number of the inhabitants of the village came up. Saluting these as became their respective rank, he signed to them with his hand to sit down. Expressing their thanks profusely and begging him to be seated first, they crowded the choultry full.

"Astrologergaru," said Rajasekhara opening the conversation, "for a long time you have entirely ceased visiting me. I suppose everybody is quite well at your house?"

"Thank you," replied the astrologer; "thank you; by your honour's favour we are all quite well. What can such people as we lack while your honour—a very jewel of the Lord!—is in the village? You are capable of protecting and supplying any number of families with food and clothing. It is simply through our good fortune and the merit of our former existence that such benefactors as your honour deign to favour our village with their presence." Then, turning to Ramasastri, "of course it isn't the proper thing for us to praise him to his face; but, you must understand, Rajasekhara is just divine!"

Ramasastri signified his assent to this remark by a low laugh. "Is there," said he, "any doubt of that? Is it necessary that you tell me this? It is only because he is in the place that we are able to remain. Wouldn't it have been necessary, otherwise, for us long

* The *Darbha*—*poa cynosuroides*—is a sacred grass used in making *puja*. Brahmins who are strict in the observance of caste rules sometimes wear a gold ring in the form of a tuft of this grass.

before this to leave house and home and get off to foreign lands? Since his honour's father settled here this has been something like a village; but before that it had neither 'a local habitation nor a name.'"

Thus whenever a good opportunity offered, he mixed in a few of his own praises as a spice to those of the astrologer—and that, too, without any attempt whatever at hiding his learning.

"Astrologergaru," said Rajasekhara, inwardly well pleased but adroitly hiding his real feelings; "I heard the other day that signs of possession had shown themselves in your—second daughter, perhaps? Is she any better?"

At this inquiry the astrologer's countenance betrayed considerable anxiety. After a moment's reflection he shook his head and replied: "I am having Josyula Kamavadhanulugaru to exorcise* her—but so far it has had no effect whatever. According to her horoscope, too, the influence of Saturn is just now adverse. So, to see what that will do, I've got my younger brother to offer prayer to the nine planets.† But, not satisfied with that even, I'm running around after Kamavadhanulu himself and importuning him to undertake the repetition of the *mantra* to Hanumanta the Five-faced,‡ and to perform a more efficacious exorcism, tell him that if anything is needed for the success of the rite, I'll give a few rupees even though I have to catch some Rajasekharagaru or other and carry him off to do it. This is the only reason I have for not calling for so long; would I not otherwise have managed to visit you by some means or other?"

"Sastrigaru," replied Rajasekhara, "you need not hesitate as far as the rupees are concerned. I'll give the whole four if they are needed. And even if it takes another four, you must look out for a good doctor. In our village Kamavadhanulu garu—" and glancing up at the sky he fell to reflecting on something or other. The astrologer's flattery was never lost upon Rajasekhara; nor did it ever take hold in vain, but was always sure to bring more or less of a return in the shape of hard cash.

Neither in Dhavalesvaram nor the surrounding villages was there another astrologer. Some one or other was for ever coming to his

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* By applying the *vibhuti* or sacred ashes.

† The *Grahas* are the nine heavenly bodies that appear to move, *viz.*, the five major planets, the sun and moon and *Rahu* and *Katu*. Each is supposed to have good or evil influences.

‡ The monkey-god, an ally and spy of Rama. His *mantra* must be repeated one hundred thousand times.

house to ask him to fix an hour for a journey, or to ascertain what time was unlucky, or what day best for dividing and putting on a new cloth; what month was favourable for commencing the building of a new house, or what day of the week propitious for having a shave; to beg him to determine the period for a wedding, or name the star at the occurrence of puberty. If they wished to know how long the defilement must continue when distant relatives died; if they desired to ascertain for how long it was necessary to leave the house when any one departed this life under an evil star; if they wished to learn what propitiatory rite was proper when a child was born in the fourth and similar lunar mansions—it was indispensible for them to consult the astrologer. No matter what farmer's cattle strayed, no matter in whose house any article was missing—he would come without fail and consult the astrologer. On all such occasions as these he would spread sand on the ground in the street porch, write certain talismanic letters and numbers in it with the straw of a broom, look up for a moment in an attitude of deep reflection, and then dismiss the questioner with the assurance that so and so had happened or that the affair would occur in such and such a manner. He also prognosticated the results of the fall of lizards and other reptiles, and foretold by auguries the time when an addition might be expected to the family. In short, in all the villages of that vicinity no event, whether auspicious or inauspicious, occurred without the advice of the astrologer. His forecasts most frequently turned out to be sheer falsehood; but since now and then some things came true by mere coincidence the people believed his word to be infallible.

One of the number then in the resthouse observing quietly that "*Byragis* are great at witchcraft," Rajasekhara turned to the astrologer and remarked, "By the way; as soon as you mentioned byragis it occurred to me that I heard a report that some byragi or other had come to this place some ten days ago. Shouldn't you show the child to him? The medicinal roots and empirics of the ascetics are well known to these Gosains. * No matter how incurable the affection may be, they rid you of it in a trice."

No sooner had he uttered these words than the whole resthouse was filled with cries of "Good!" "True!" "He should certainly do as you say." Let only the speaker be rich, even the most sense-

* Brown defines the Gosains as "secular monks or fakirs who never marry, and who live in monasteries. Their profession is traffic, the profits of which go to their *mohant* or teacher."

less utterance is sure to be counted worthy of applause. So Rajasekhara, made bold by these words, lauded the *byragi* to the skies even though he himself had never seen him.

The astrologer betrayed by his looks a pleasure which he did not feel at heart, and smiled a bland smile. "At your honour's mere word," said he, joining his hands with an appearance of humility and fixing his eyes on Rajasekhara's face; "at your honour's mere word our little one's trouble is gone. It is certainly through her good luck alone that this advice emanated from my lord's countenance. In accordance with your honour's kind permission I will proceed at once to the byragi;" and he rose as though about to go. No sooner did Rajasekhara's opinion become somewhat generally known, than the whole assembly was overwhelmed in praises of the byragi. He was, they affirmed, a most magnanimous man; an eminent magician; one who subsisted on air and did penance in the burning heat of summer in the midst of five fires. When a great man votes another a good fellow, who will rise in opposition? what mouth will not grope in search of flatteries?

Just then Rajasekhara looked toward the street and said, "Some women have come for water, but seeing us here have modestly retreated a few steps and stand looking aimlessly at one another. Come, let us all go and see the byragi." At this signal all arose and proceeded together up the street in the direction of the Feet of Rama.

J. ROBERT HUTCHINSON.

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## *A RAMBLE IN NORTHERN JAPAN.*

One bright morning in August, our party of four, two ladies and two gentlemen, started from Hakodate, the northern open port of Japan, on a three days' trip, to visit an ancient Japanese town. The view that met our eyes as we descended from the town on the hill-slopes to the wharf, was beautiful in the extreme. The sun was but a few hours old, and the delicate grey haze of dawn still veiled the mountains, and hung lovingly about the hills, while the valleys were bathed in the brilliant sunlight. Below, lay the blue waters of the bay covered with native and foreign shipping, and the long line of white sandy beach; to the left, green crested cliffs running sheer

down to the water's edge; to the right, a low belt of land and the far stretch of the Pacific Ocean, with one full rigged ship gleaming in the sun.

At the wharf a small crowd of men assailed us, all gesticulating, and talking at once in various tones of entreaty or persuasion. By a judicious system of inverted auctioneering, in which one becomes skilful in the East, a boat was hired for a reasonable sum, the half of what was at first demanded. These native boats are flat and made of unpainted wood which the sea and sun bleach almost white: the passengers sit on mats in the bottom and give themselves up to a rolling motion, the reverse of pleasant. The oar passes out obliquely from a point near the stern, and pivots loosely on a small peg fixed in the bulwarks. From a convenient point in the bulwarks somewhat further forward a cord passes to the handle, its terminal loop slipping over an upright peg in the same. This restraint is such as to compel the oar to take naturally the screw motion peculiar to sculling, so that the oarsman's action is reduced to a simple to-and-fro swaying of the oar handle, while his body in its jerky movement is thrown into curious attitudes, not unlike those of a yew tree blown about in a gusty gale.

The morning air was fresh and pure, and the water so still that we could look down into the green depths and see the graceful seaweeds and brightly coloured anemones clinging to the rocks with occasionally a fish darting out and in amongst them in joyous freedom. A few sea-birds floated lightly on the water, or sat on the masts of the quaint looking junks and merrily chattered to each other and discussed the behaviour of the crows, who had left the wood behind the town and come out for a breath of sea air. All was peace and lighthearted joy, but away there to the right rose the pale charred volcano of Koma-ga-take telling of past turmoil; and under the cliffs to the left lay the shattered hulk of a ship, wrecked one dark night of fierce winds and raging waves. Thus it always is in life, the shadow close by the sunshine; and it is best so, for if it were always sunshine we should scarcely know how beautiful the sunshine is. The sight of that past shadow did sadden us for a little time, but soon the thankfulness that we were in the sunshine made us joyous again. The hours were pleasantly spent in telling stories, singing songs to the delight and admiration of our boatman, or dreamily drinking in the beauties around us. Before long our destination was reached, and the boat was "backed in" on the shore. The beach was strewn with nets laid out to dry,

old fragments of boats, oars, masts and helms, sails in need of repair, and the rubbish that adorns fishing villages in all lands. The village was a straggling collection of wooden shanties rising out of the sand, and in the hot sun the place had an uninviting look. A crowd of curious natives, men, women and children, surrounded us, and gazed with interest at us and our belongings, especially the side saddles. There seemed to be no inn, so we entered the first house that offered, which happened to be a shop of modest dimensions. The old woman in charge was smoking over the tiny charcoal brazier which is a necessary article of furniture in a Japanese house. She looked up, smiled a kind welcome, and made room for us amongst the sugar tubs, "boxes of indigestion," umbrellas and dress goods hat formed her stock-in-trade.

Smoking is quite a feature of this country, and both men and women indulge in the habit to a large extent. When you enter an inn, shop, or private house, the small box with hot charcoal and ash-dish is brought to you even before the cup of tea, and much amazement is expressed if you do not smoke. The pipe case and tobacco pouch, often decorated with tasteful designs, are worn by all, and form a noticeable detail of the national dress. The merchants and artisans carry theirs stuck in the back of the belt, those of higher rank in the front; while the women of all ranks have theirs at the front in the folds of their broad sashes. The pipes usually have a bamboo shank, with brass or copper mouthpiece and bowl; only the rich can afford entirely metal ones. When a coolie stops to rest, his first act is to pull out his pouch and pipe, fill the tiny bowl, take two or three puffs—all that the "fill" will grant—knock out the ashes and return the pipe and pouch to his belt. Perhaps ten minutes after he will go through the same performance. A Japanese, whether in a shop or a private house, or on the street, seems unable to collect his thoughts without the aid of his pipe, and he would scarcely dream of concluding a bargain outside the fumes of tobacco smoke. It is curious to see a pretty, daintily dressed lady of rank take out her pipe, fill it with neatness and skill, and punctuate her polite enquiries after your health by puffs of smoke from the smiling lips. Our old shopwoman evidently considered she required all the stimulus a smoke could give her to sustain this sudden inroad of foreigners, for she kept on filling and refilling the bowl with great vigour, and the top of her pipe as she struck the edge of the brazier to knock out the ashes, served as an accompaniment to her even flow of talk.

Meanwhile we enquired for the man from whom horses could be hired, and were told he was from home and no horses were to be had, as they had been driven up the hills. Being learned in Japanese travel, we knew how much of this statement to believe, and only repeated our demand and quietly awaited the result. There is no use in hurrying the Japanese, especially the country folk who have no idea of the value of time. The fact is they won't be hurried, and one but lessens his chance of being served in reasonably short time by attempting it. One of our party, who spoke the native tongue fluently, explained in forcible language how necessary it was for us to have horses, and how sure we were that such could be got easily, would they but go for them. The men stood in knots, lighted their pipes, and discussed the serious matter, the women stared open-mouthed and giggled, their blackened teeth adding no beauty t their shrivelled brown faces; and the children swarmed round us and made merry jokes at our expense. A flourish of our riding whips would send them helter-skelter down the street, only to return with renewed courage a few minutes afterwards. Our friend repeated his demand, adding that if they would not give us the horses we would go and take them. One man seemed impressed with this statement, put his head to one side—a favourite attitude with the Japanese when they wish to appear thoughtful, uttered a prolonged "heigh," and set off running down the street, followed by a crowd of shouting boys. Presently he returned with five as miserable nags as one could hope to see, but as further search brought forth no better, we decided to try them. The necessary business of saddling and bridling over, we mounted our chargers, and started up the street in Indian file, attended by the villagers, who seemed dumb with wonder at women riding, and able to keep on sideways with no visible support. The horse bringing up the procession would not go on, wished to turn back, and no persuasion or compulsion would make him stir in the desired direction. Another of the steeds proved to be lame, so we were all brought to a standstill and a lively discussion took place between us and the native horse-dealer. At last we got an exchange for the obstinate horse, but the lame one was doomed to proceed. The lameness seemed to be constitutional, for it did not materially interfere with the animal's progress, and at a slow "scramble" we cleared the first five miles.

The bridle path lay along by the sea on the top of the cliffs, and occasionally ran down and took a peep at some fishing hamlet nestling between two headlands. The mist had now passed away from

the hills and mountains, and they stood clearly defined against the noonday sky. Seawards lay the peaked rock of Hakodate like a sentinel guarding the noble bay, which could afford shelter to a great fleet. The water splashed on the narrow beach with a gentle singing murmur, and the insects hummed and buzzed loudly in the trees and amongst the bright flowers that bloomed on every side.

We stopped at a little village to get relays of horses, and gladly bade farewell to the poor steeds that had carried us thus far. While waiting, we entered the inn and had some refreshments from our own stores. The gentlemen, to save us trouble, had kindly undertaken the commissariat, and the result was scarcely satisfactory. No butter, no sugar, no spoons or forks, and a limited supply of bread. However, we did not fear starvation, as good Japanese food was procurable; and as for spoons and forks, we were old enough travellers to use chopsticks with skill. The inn was decorated for a religious festival, and little household shrines decked the rooms, and offerings of cakes and flowers stood in front of a gilt image of Buddha. In one dark corner a taper burned at a shrine, and more than once during our short stay an old man or woman came in and knelt down before it and mumbled a few inarticulate words. There was no temple in the village, and the inn, as the principal house, was made to do duty. This house had a small court on to which opened the house-place where all the cooking is done. In the centre of the floor was the hearth, a square space sunk about a foot, built round with metal, and filled with small gravel. The fire, whose smoke blackened the rafters on its leisurely way to the open air, burned in the middle, and over it hung a large kettle of water,—hot water can be got at all times in Japanese inns. On the gravel of the hearth, outside the fire, were numerous kettles of gently diminishing sizes, some in copper brightly polished, and others in iron tastefully ornamented; the tin in which '*saké*' (rice beer) is heated; one or two pipes; a tiny rake for keeping the gravel tidy; and the iron chopsticks used to trim the fire. Round the hearth was gathered a group of old cronies, men and women, discussing the village affairs with the help of tobacco and *saké*. In one corner of the room stood the clay built-in boilers where the rice is cooked; in the opposite corner a maiden leisurely washed dishes, and a man cut up fish and vegetables for the evening meal. Along the wall, between the corners, stood a great cupboard full of dishes, the round wooden or lacquer boxes in which the boiled rice is brought to guests, and the square raised trays that do duty for

tables. The guest rooms led off this house-place from which they were separated by the usual paper sliding screens. All Japan houses are laid with mats made of straw, an inch and a half thick, covered with fine bamboo matting, and bound with cloth. One always removes one's shoes before entering the house; not to do so would be as impolite as for one of us to put his boots on the sofa.

The steeds were now brought round, strong, lively animals, quite ready for the long ride before them. Japanese horses are small, the size of our ponies. Mine was blind of an eye, but this seemed rather to help than hinder, if one might judge by the way he led off the party, and kept the lead till the end. Perhaps his "single eye" to business helped him as it does men and women! The path lay on the sea shore and we cantered merrily along the harder sand at the water's edge, or on the grassy bank above. The sun was very warm, but we were well protected from its rays by sun hats and the sea breeze tempered the heat. The only signs of human life that met our eyes for many miles were a lonely fisher's cabin and a sail out at sea. Our steeds went well, and in pairs—a most unusual thing for packhorses that are trained to follow head to tail. After three hours' steady riding we alighted at a little inn and refreshed ourselves and the horses with a drink of water. The smiling hostess brought us the customary cup of tea, and begged us to stay all night. We gladly accepted the tea, but declined the invitation to stay.

We mounted again, and as the sun's rays were lengthening neared our halting-place for the night. The scene was very peaceful and green, and reminded us of a quiet spot in England. The broad, shallow river, bordered by willow and beech trees, the horses leisurely bathing themselves after their day's labour, the merry voices of the children sounding sweetly on the soft air, gently undulating hills in the back-ground, and the mellow light over all, formed a picture as nearly English as one could find in a foreign land. To reach the village, we had to ford the river; this done, we soon found our inn and made ourselves comfortable for the night, our cooking operations, conducted under difficulties on the small charcoal fire set in to the floor, were a source of great interest to the natives; they crowded round, asked questions, and desired to taste some of our eatables, and brought food of their own in exchange. A Japanese inn is not pleasant after dark, because of the imperfect means for lighting up the rooms, and weary travellers like us, retire very early. We laid quilts of doubtful softness on the floor, hung

up mosquito nets, closed the sliding screens to form separate rooms, and hurried into dreamland.

Next morning we awoke to a dripping world, and the conviction that unless the rain cleared off the day must be spent in this dreary inn. It was hard, but with cheerful resignation we ate our breakfast and then got books and set ourselves to read. About 10 o'clock the rain stopped, and after consultation with the native weather prophets, who declared for a fine day, we ordered horses, and gathered our possessions together ready for a speedy departure. Soon a great stamping was heard, and a drove of horses came trotting down the street and entered the corral (a fenced-in space into which the animals are driven to await hire). We crossed the road to choose our steeds, and picked out four of the best. They were very brisk, and would scarcely stand still to be saddled, and I experienced difficulty in mounting mine; he probably never had carried a foreign saddle before. The start was made at a rapid pace, the hard-mouthed little animals almost proving too much for us. The noisy crowd behind excited my horse, and before I could breathe he bolted down a narrow lane overgrown with vegetation, and tried to rub me off against the trees. With difficulty I stopped him, and turned his head in the right direction. His next act was to rear and shake himself, and when this failed to unseat me he backed into the scrub, and there we stood wedged in between the trunks of trees, the wet branches giving us a shower bath. I called for help and was soon rescued, and changed horses with one of the gentlemen. While the transfer of saddles was going on the wild little animal broke away, and galloped back to the village with the side-saddle swaying helplessly on his back, and a small crowd in hot pursuit. A wild chase ensued, and, after considerable trouble, he was brought back, and we proceeded on our journey.

The way lay through much wilder scenery than yesterday, and we quite lost sight of the sea. Occasionally we passed a hamlet, where the land immediately surrounding it was carefully cultivated; but for the most part we threaded the scrub and saw no sign of human life. The vegetation was rich and varied, creeping plants of great beauty clung to the trees, which were mostly deciduous, or tenderly clothed the bare fallen trunks of dead forest heroes. The path was often the course of a stream, which the previous night's rain had made brawling and noisy, or a zig-zag cutting on the side of a steep slope, with the bamboo grass and undergrowth reaching above the horses' heads. There was no sound of animal life save the hum of

the insects, for singing birds are almost unknown in Japan, and in this lonely high land not even songless birds were to be found. We crossed one pass and entered a broad valley completely shut in by mountains, green to their summits. Telegraph posts stood gaunt and bare along the route, showing that modern civilization had pierced even to this wild spot.

Another pass brought us out of the valley into a narrow dell, where stood a few houses built of planks, and enclosed by a strong, high fence. We stopped and spoke to a man at a door, who told us that the mountains abounded in bears, and only a few weeks before two horses were devoured by them in the valley we had just left. The snow lies in these hilly regions for five or six months of the year, and the inhabitants have a hard struggle for existence. State prisoners are banished here for life. It had struck us that surely no one from choice would earn a precarious livelihood in this loneliness. We now forded a stream, and entered a steep path where trees shut out all view. Our sturdy horses needed all their skill to keep their footing on the rough track, rendered slippery as it was by the recent rains. At the top was a flat table land, where we found a rest-house so like a Swiss chalet that we fancied ourselves in Switzerland. We dismounted, and rested while the horses had their dinner. The kindly host and hostess were glad to see us—so few people, and these hardly ever foreigners, pass this lonely way—and they plied us with questions as to our occupation, age, country, etc., and desired us to write our names in the guest-book.

The afternoon was drawing on, and we hastened to remount and continue our journey, for we had still many miles before us, and in this hill country one cannot go quickly. We soon began to descend a steep, wild pass several thousand feet high. The narrow, uneven road in many places overhung a deep ravine, where one false step of the horse would have plunged the rider down into the dark depths of tangled foliage. The grand, weird beauty of the scenery took away all fear, however, and we had faith in our sure-footed steeds. The day was clear, but not sunny, and the soft grey sky added sereneness to the lonely heights, and depth to the deep gorges. At one point the way seemed shut in close with no outlet, then a turn would reveal dark wooded mountains dovetailing into each other, and rising above these in the further distance, bleak, bare ridges gleaming for a moment in some stray sunbeam ; again, all was changed, and down below lay a narrow peaceful valley with the silver thread of a river dividing it.

The foot of the pass was gained in safety, and we went at a quick trot through the valley, and on to the plain, where a fresh breeze met us. After fording one or two streams a sight was gained of the sea, and the fishing town of Fukushima. Like many Japanese towns, it straggled along irregularly, and the houses ran out and in at their own pleasure. A man directed us to an inn on the sea beach and we were nothing loth, after our seven hours' ride, to rest and refresh ourselves. We wished to snatch a short sleep, but could not for the droning of a priest in the next room, who had come to say prayers for the family at the household shrine. The shrine stood two or three feet high, was shaped like a temple, with sloping roof, and was decorated with paper shavings, gilt tinsel, and gauze, and lighted with candles, through which peeped a Buddha. The priest knelt down before the shrine, and struck a little bell to note the number of times he said the prayer, in which we could catch the name Butsu (Buddha). He rattled off the prayers very fast, as though "his primary object was speed," and perhaps it was, for he had to visit many other houses that day, and the oftener he said the prayers, the greater was the blessing Buddha would grant him and the household. The priest was dressed in loose purple silk crêpe trousers like a "divided skirt," white grenadine outer robe, and under robe of white cotton; and round his neck and down to his waist hung a broad band of gold and purple brocade; his head was shaven close, and his feet were bare.

One of our party became ill, and we were afraid that we should need to stay here all night, but as he recovered quickly, we sent for horses, and got ready to start. It was past six o'clock when we were fairly off, and we made all speed along the beach in order, if possible, to gain the head of the pass before the light failed us. But we had misjudged our distance and the short Japanese twilight had drifted into night when we began the ascent. Fortunately there was a moon to light us, and the horses knew every step of the way. We were now amongst the bleak mountains we had seen earlier in the day gleaming in the sunlight. The path was very steep and rough, and it took some horsemanship to keep in the saddle. At one place near the top the road was solid rock, worn smooth by constant traffic, and one involuntarily set one's teeth and gripped the saddle more firmly as the horse struggled up. The ridge was barely ten feet broad, and on each side yawned an abyss, dark and terrible in the faint light. When the descent

began the road was more level for some distance. Soon, however, we got into the shadow of the mountains, and the moonlight outside only made the darkness deeper. The path, too, grew rougher and steeper and often was but the bed of a stream, with b loose stones over which the horses stumbled. Our own stee could hardly be distinguished, and those behind and before wer quite invisible. We called to each other to keep up courage, and stayed in the saddle as long as possible none wishing to be outdone by the others in bravery. But the track became so uneven and the descent so abrupt that we decided to dismount and trust to our own feet. We scrambled on in the darkness, splashing throug water and mud nearly falling over stones, and feeling the way witl our riding whips. The two gentlemen were in front, ready to meet any danger, and warn us of it. All went safely for some time and we hoped soon to be out of this gorge and into the moonlight again.

Suddenly there is a great crash, and then a cry, and a woman's voice screams for help. Up comes the last of our party as fast as she can, fairly dragging her horse after her, and in her eagerness superior to every obstacle. The cry becomes louder, and a man's voice sounds from the depths; "Help, quick! I can't hold on a moment longer. I'm losing my grasp!" Up she hurries in the direction of the voice and asks what is wrong. "He's fallen over the cliff, oh, save him," answers the woman's voice. The man calls again in a tone of agony! "Give me your hand at once the branch is giving way." She throws away her horse's reins, lies down flat, with her right hand firmly grasps a projecting rock, puts over her arm, and is thankful to find it long enough to reach the poor hand stretching up for aid. A hard struggle of a few seconds—which seems an age—and the man is landed on the path, not much the worse of his accident. The escape was narrow, for had not a branch caught him he would have fallen down thirty or forty feet amongst rocks, and been badly bruised and hurt, if not killed.

After this exciting incident we groped our way even more carefully, and were very glad when the foot of the pass was reached. The rescued man began to feel a little tired and shaken, and got into the saddle and drove the other horses before him. The rest of us preferred to walk ahead at a brisk pace, which was thoroughly enjoyable after the crawling and stumbling of the last few hours. Our merry chatting was rudely interrupted by a shout from behind and a quick tramp of feet. We turned and beheld the h ses coming along at an increasing rate of speed evidently intending t run away

to their stable if we did not stop them. "Rush at their heads," cried our cavalier, and he made for two and secured them while one of the ladies took to her heels screaming lustily, and fled up the bank, the other lady attached herself to the neck of the remaining horse, determined not to let him escape her, and the pair, after a struggle, landed in the scrub.

We mounted, and rode into the clear moonlight, which never seemed more bright and welcome. The mountains were now left behind, and the sea came in view, its waters shimmering in the silvery light. The track bordered the beach, and often the waves laved the horses feet. The red lights of Matsumai, our destination, appeared ahead, and we cheerily galloped towards them. By the roadside lanterns and fires were burning at stated intervals, placed there by the natives to light the souls of the departed relatives, who had got three days' leave of absence from the other world to visit their friends on earth. Several processions of white-robed priests, and people carrying banners and lanterns, and chanting plaintive songs to more plaintive accompaniments, passed along the road. They looked ghostly in the pale moonlight, and the midnight hour added weirdness to the scene.

Although the hour was so late, the town was all alive and our inn was easily found. Very grateful were the food and rest after our ride of over thirty miles. Our cooking occupied some time, especially as we indulged in the luxury of chicken fried in rapeseed oil; and it was two o'clock in the morning before we lay down to rest.

We rose early and took a short walk through the town, in order to see a little of it before our departure in the steam launch at eight o'clock. One of our party who had been here on a former occasion stayed to cook breakfast, and the result on the whole did him credit, although the hot cakes, on which he prided himself, were a signal failure, and somewhat resembled inferior porridge!

The town was overlooked by the remains of a picturesque castle, built, as usual in Japan, on a hill occupying a central position: only the white watch-tower with its graceful sloping tiled roof, and a few dismantled rooms now used as a public school were left of its former glory. Instead of stately, heavily-armed soldiers, pacing the courts, we saw merry school boys hurrying to their classes, their wooden sandals making a noisy clatter and their voices sounding pleasantly as they shouted to each other. The public gardens are beautifully laid out on part of the castle site, and even at this early hour they were well filled with people—dainty young maidens

in tasteful soft-tinted dresses and bright sashes; women with babies strapped to their backs and cheery, smiling faces; boys with close shaven heads and girls with short hair arranged in comical tufts tied with blue and red crêpe playing happily together; and a few men, showing in their felt hats and boots the influence of Western manners and customs. From the gardens we looked down on the brown shingle roofs of the houses, with here and there the tiled roof and white walls of a store-house standing out in vivid contrast; and on a fleet of junks that rocked at ancho close to shore. Further up the hill were some fine temples drowsily resting in their tree-shaded courts. The bells, always deep and rich in Japanese temples, were sounding sonorously for matins, but few besides old women, scrupulously neat and tidy in their dark blue dresses, seemed to be obeying the call. They hobbled past us up the stairs, murmuring prayers as they went.

Matsumai was formerly a place of much importance: all the trade of Yezo passed through it, and travellers who wished to proceed into the interior had to obtain passports there. But its prosperity received a fatal blow when the *daimyo* (feudal lord) retired to the capital, Tokyo, on the breaking up of the feudal system; and much of the property was destroyed during the fighting in 1869. The inhabitants mourn sadly over this state of affairs and the fact that Hakodate is taking away all the trade. This is but natural when Hakodate has a magnificent harbour, and this place lies exposed to the great roll of the open sea.

In the town were a telegraph and post office, an hospital, a prison, ome schools in foreign style of architecture, which show that wnspeople are alive to the advantages of Western civilization. in came on heavily and chased us back to the inn, for none of oiced in the possession of an umbrella; and so we saw no more town.

er breakfast we hurried to the wharf attended by a small of admirers, and put off with many other passengers in a e boat to reach the steam launch that lay a short distance shore. Quite a number of steam boats and launches ply to fro along the coast of Japan and they are much patronised by people themselves, who are beginning to appreciate a more form of transit than the old junks or open boats. The large ners have foreign captains, officers and engineers, but the er ones and launches are entirely manned by Japanese, with the ption perhaps of a foreign engineer.

A Japanese on board-ship usually calmly gives himself up to be miserable, lies down on any space free from others like-minded, and speaks not and hardly moves till his destination is reached. The decks above and below were spread with prostrated forms and we had to gingerly pick our way amongst alternate legs and heads. The only vacant spot was the bow where, on the anchor chains, we prepared to enjoy life. Such, however, was not our fate for strange but unmistakeable sensations informed us that the five hours sail would be far from agreeable to ourselves or those around. The constant temptation to look over the bulwarks and study the waves could not be resisted; and one lady much amused us by giving gracious permission to the other to be seasick. In this simply hopeless state we remained till Hakodate Rock came in sight; then we brightened up marvellously, and when the launch came to anchor, tripped gaily on shore to greet the friends we had parted from two days and a half before. They had hardly expected to see us back so soon from our ramble of a hundred miles.

MARY KNOTT.

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## *LIGHT AND SHADE.*

Is shade but the antithesis of light?
Yet fairest far the flowers those shades between
Now softly sleeping on the meadows green:
The "many-twinkling smile of ocean" bright
To dancing shadows owes its joyous might:
And, in the world within, from sorrow keen
The charm joy borrows may full oft be seen
By mental eyes that are not dim of sight.
Of contrast can we never be in dearth,
For Evolution, from the very clod,
Works countless change. But while ye kiss the rod
Of fate, this comfort take, ye sons of earth,
"*Lux umbra Dei,*"—shadows owe their birth
To light—and Light the Shadow is of God.

W. A. SYMONDS.

## THE REPORT OF THE SOCIETY FOR PSYCHICAL RESEARCH ON THEOSOPHY. *

Most of our readers are aware that soon after the publication of "The Collapse of Koot Hoomi" in our pages the Society for Psychical Research, which had already taken up the question, resolved to send one of its members to India to investigate, on the spot, the evidence for the alleged phenomena, and to attempt to determine whether or not the letters which we published, as written by Madame Blavatsky, were genuine. Mr. Richard Hodgson, B.A., Scholar of St. John's College, Cambridge undertook this duty. He arrived in Madras towards the close of 1884 and spent the following three months in making a very careful examination in Madras and other parts of India of all the circumstances connected with theosophical "phenomena." On his return to England he submitted an elaborate report to the Society at its meetings on May 29th and June 24th, 1885. The publication of this report was delayed on account of various difficulties, but this is the less to be regretted as it has enabled Mr. Hodgson to add several important notes and appendices including facsimiles of some of Madame Blavatsky's letters. Mr. Hodgson's report is prefaced by the report of the Committee of the Society which had been appointed in May, 1884, "for the purpose of taking such evidence as to the alleged phenomena connected with the Theosophical Society as might be offered by members of that body at the time in England, or as could be collected elsewhere." The finding of this Committee is as follows :—

"After hearing what Mr. Hodgson had to say on these points, and after carefully weighing all the evidence before them, the Committee unanimously arrived at the following conclusions :—

(1) That of the letters put forward by Madame Coulomb, all those, at least, which the Committee have had the opportunity of themselves examining, and of submitting to the judgment of experts, are undoubtedly written by Madame Blavatsky; and suffice to prove that she has been engaged in a long continued combination with other persons to produce by ordinary means a series of apparent marvels for the support of the Theosophic movement.

(2). That, in particular, the shrine at Adyar, through which letters purporting to come from Mahatmas were received, was elaborately arranged with a view to the secret insertion of letters and other objects through a sliding panel at the back, and regularly used for this purpose by Madame Blavatsky or her Agents.

* Proceedings of the Society for Psychical Research. Part IX. London: Trübner and Co., 1885. Price 4*s*. 6*d*.

(3). That there is consequently a very strong general presumption that all the marvellous narratives put forward as evidence of the existence and occult power of the Mahatmas are to be explained as due either (*a*) to deliberate deception carried out by or at the instigation of Madame Blavatsky, or (*b*) to spontaneous illusion, or hallucination or unconscious misrepresentation or invention on the part of the witnesses.

(4). That after examining Mr. Hodgson's report of the results of his personal inquiries, they are of opinion that the testimony to these marvels is in no case sufficient, taking amount and character together, to resist the force of the general presumption above mentioned.

Accordingly, they think that it would be a waste of time to prolong the investigation."

In a preliminary report, the Committee had stated that if certain phenomena were not genuine it was very difficult to suppose that Colonel Olcott was not implicated in the fraud. This opinion they have now modified and they report :—

"After considering the evidence that Mr. Hodgson has laid before them as to Colonel Olcott's extraordinary credulity, and inaccuracy in observation and inference, they desire to disclaim any intention of imputing wilful deception to that gentleman."

We shall see presently some of the evidence brought forward in support of this conclusion, but meanwhile it may be amusing, if nothing more, to set beside it Colonel Olcott's own statement, taken from the Report of the Decennial Anniversary of the Theosophical Society published in the *Theosophist* for January. Speaking of Madame Blavatsky he says :—

"If she were the unmitigated trickster alleged I should have been the first to know it, and must have been her accomplice. Some after vainly trying to impeach my own character have put forth the paltry theory that my integrity is saved at the expense of my intelligence; in short that if not a knave I must be a perfect fool! But my past career proves me to have been neither the one nor the other; and so my only reply to these unworthy and dishonest aspersions is a silent contempt too deep for words."

On a question like this it is of interest to have Madame Blavatsky's own opinion of the President Founder and fortunately one of her letters which was shown to Mr. Hodgson gives it with sufficient candour :—

". . . Writing about him [Colonel Olcott] from America to a Hindu in Bombay she characterised him as a 'psychologised baby,' saying that the Yankees thought themselves very smart, and that Colonel Olcott thought he was particularly smart, even for a Yankee, but that he would have to get up much earlier in the morning to be as smart as she was."

We would gladly say no more on this part of the question but if we are to admit Colonel Olcott's *bona fides* and at the same time

maintain the position which we have taken up respecting the "phenomena" it is necessary to give some proof that the Colonel has not the faculty either of observing accurately or of drawing trustworthy conclusions from what he does observe.

One of the cases on which the President Founder has always laid great stress is Damodar's "Astral" journey from Moradabad to the head-quarters at the Adyar and back. The circumstances which rendered this journey necessary may be briefly summarised from Colonel Olcott's evidence before the Committee. When at Moradabad N.W.P. on a journey from Bombay to Cashmere he was strongly urged by a gentleman, Shankar Singh, to use his supposed mesmeric healing power on two lads who were paralysed. Colonel Olcott refused, "having" as he said "already within the previous year done too much of it for my health." Damodar was appealed to and undertook to go to the head-quarters and enlist Mdme Blavatsky's sympathy. He accordingly went into his room sent Mr. Shankar Singh out and shut the door. A few minutes after he was found in the verandah and claimed to have visited Madras in the interval and conversed with Mdme. B. She, he said, had refused to interfere, but while they were speaking they received a message from the Mahatma who was Colonel Olcott's "teacher" (not Koot Hoomi.) The message was as follows :—

"Henry can try the parties once, leaving strongly mesmerised. Cajapati oil to rub in three times daily to relieve sufferers. Karma cannot be interfered with."

This message was confirmed by a telegram received from Madame Blavatsky next morning. Colonel Olcott maintained strongly that conspiracy was impossible in this case; that it was not even known that he was at Moradabad on the day in question since,

"Owing to the rapid spread of our movement in India, I, while on tour, was constantly obliged to interrupt the previously settled programme and go hither and thither to form new branches."

Two at least of the statements given in this evidence were not borne out by facts. The reason given for not using his healing powers hardly agrees with what Mr. Hodgson learned :—

"I was informed by a Poona Theosophist that 200 patients were assembled, and that Colonel Olcott had striven mesmerically with about 50 of them, the results being *nil*, whereupon the Poona Theosophists drew up a protest against Colonel Olcott's disgracing the Theosophical Society by professing to produce cures in the face of such conspicuous failure. Notwithstanding this, however, Colonel Olcott might have been persuaded by Mr. Shankar Singh to the redeeming of his promise; it was perhaps for this reason that a special

injunction against his undertaking any cure was issued in the form of a Mahatma document, which reached him through Mr. Damodar."

The other point is his assertion that they did not know at headquarters the date at which he was to be at Moradabad. When at the Adyar, Mr. Hodgson took an opportunity of asking Colonel Olcott to give him from his diary the actual dates at which he visited the various towns during this tour. He replied that he could get them from the programme of the tour antecedently published in the Theosophist *as the programme had been carried out.* On Mr. Hodgson pointing out that his evidence before the Committee left the impression that the programme had been interrupted he gave the dates from his diary with this result:—

"Twelve towns were mentioned in the programme, [which bears the date of October 17th,] which extended over the dates from October 22nd to November 18th, and the dates corresponded in every case but one with those of Colonel Olcott's diary, the discrepancy in that case being probably apparent only, and not real. (According to the diary Cawnpore was reached on November 2nd, and the time given in the programme was 12-24 a. m., on November 3rd.)"

Hence it was known by Madame Blavatsky when Colonel Olcott would reach Moradabad, and it was also known that these "parties" would be brought to him so that everything was in favour of an attempt to produce a striking phenomenon. Yet Colonel Olcott asserts in his evidence that this is a particularly trustworthy case and that "all the elements are against any procurement."

Several other cases given in the report show clearly how little trust can be placed on the Colonel's evidence but we have space for only one.

In reply to a question put by Mr. Myers in connection with the alleged appearance of the "Astral" form of a Mahatma when he was in New York, Colonel Olcott stated:—

"I never saw a living Hindu before I arrived in London on my way to India. I had had no correspondence with anybody until then, and had no knowledge of any living Hindu who could have visited me in America."

Yet as a matter of fact he had been in familiar relation with a Hindu long before he reached London on his way to India, and even long before the "Astral" figure appeared to him. When this was pointed out to him:—

"He accounted for his statement to the Committee by urging that his attention at the time was directed to the possibility of personation of the Mahatma's 'astral form' and that he momentarily forgot his experiences with M. T. and other Hindus."

This momentary forgetfulness must have again attacked him when

he had the opportunity of correcting the proof sheets of h[illegible] dence. Lest any should be inclined to say that the simplest explanation of these cases is that Colonel Olcott was cognizant of the frauds, it is only fair to point out that Mr. Hodgson received from him every assistance in the prosecution of his enquiries, and that he appeared throughout perfectly open and straightforward.

It would take us too long to follow Mr. Hodgson in his enquiries into the trustworthiness of several of the other prominent theoso phists, those who think it worth while examining this question wil find ample material in the report; we pass rather to more interestin details.

After our exposure of the mechanism by which the shrine phenomena were produced it was given out that the shrine itself had mysteriously disappeared, carried off, we suppose, by the outraged Mahatma. It was not long before we learned what its real fate had been, but we were not at liberty to publish the evidence tha had been given us. The following is Mr. Hodgson's account of it.

"The ultimate fate of the Shrine, according to a statement made by Dr Hartmann to Mr. and Mrs. Cooper-Oakley, Mr. Hume, and myself, was as follows. After the expulsion of the Coulombs, Mr. Judge, an American Theosophist, then residing at the headquarters of the Society, was desirous of examining the Shrine. Mr. Damodar, who possessed the keys of the Occult Room, avoided this examination several times on one pretext or another; but, eventually, a party of Theosophists proceeded to the inspection of the Shrine. The Shrine was removed from the wall and its doors were opened. Mr. T. Vijiaragava Charlu, (commonly called Ananda) a Theosophist residing in an official position at the head quarters, struck the back of the Shrine with his hand, exclaiming, "You see, the back is quite solid," when, to the surprise of most of those who were present, the middle panel of the Shrine flew up. It seemed undesirable to some of the witnesses of this phenomenon that the discovery should be made public, and they resolved accordingly to destroy the Shrine. To do this they considered that the Shrine must be surreptitiously removed, but such removal was inconvenient from the Occult Room. The Shrine was therefore first removed openly to Mr. Damodar's room, and, on the following night, was thence removed secretly by three Theosophists, concealed in the compound, afterwards broken up, and the fragments burned piecemeal during the following week. Dr. Hartmann, had only retained two portions of the back of the Shrine, which he had enveloped in brown paper and kept carefully concealed in his room,—substantial pieces of cedar wood, black lacked. It was of such wood, according to a previous statement of M. Coulomb, that the back of the Shrine was made."

A considerable amount of time was spent by Mr. Hodgson in examining a number of the Theosophists about the Shrine and its environments before the exposure. The evidence obtained had

very little value except as showing how absolutely untrustworthy most of the accounts given by those chiefly interested were, for they contradicted each other on all the important points. After reading this part of the report few will doubt that the Theosophists exercised a wise discretion in not venturing into a Court of Law and subjecting themselves to cross examination. The official explanation given of the existence of undoubted trap doors, well suited for the purposes for which it was alleged that they were used, was that M. Coulomb made them after Madame Blavatsky's departure, with the express object of bringing forward a charge of trickery. Mr. Hodgson concludes his examination into this point as follows:—

"Now it would appear that after Madame Blavatsky's departure from head-quarters in 1884, the Occult Room and the Shrine were in charge of Mr. Damodar; moreover it is apparently not denied by the Theosophists that workmen were about on the terrace during the interval assigned to M. Coulomb for his secret work, and according to Mr. Damodar the door of the stairs was at all times open. If M. Coulomb under these circumstances could, without the knowledge of any persons at headquarters, have constructed the double-backed cupboard, the panel in the boarding, the side-board panel, and the aperture into the recess, he would have performed a feat which I should find much more difficult of explanation than all Madame Blavatsky's phenomena together. And the discovery that a hole in the wall immediately behind the Shrine had previously existed, but had been blocked up, and that the wall face in the Occult Room behind the Shrine had been carefully whitewashed so as to conceal the traces of the hole, would apparently compel the Theosophists to assume that this hole was, under the same circumstances, not only made but actually closed again, and *hidden* so effectually by M. Coulomb in the Occult Room, which was always open to Mr. Damodar, that it was very nearly never discovered at all. And of these alleged marvellous works we should have to suppose that Mr. Damodar, highly-developed Chela of Mahatma Koot Hoomi, remained entirely ignorant!! I think, therefore, that not only is there no evidence, to establish the non-existence of the apertures and panels in question at the time when phenomena may have been produced by their means, but that an insurmountable difficulty lies in the way of supposing that they could have been manufactured at the time to which their origin is attributed by the Thesophists, and that there can be little doubt that they were made while Madame Blavatsky herself was at head-quarters, and under her general instructions."

The explanation of the Adyar Saucer has already been given so fully that we need only add that Madame Coulomb's statement that she bought the two saucers from M. Faciole and Co. was confirmed by an examination of the books of that Firm which showed that "two porcelain pin trays," words which properly describe the saucers, were purchased for cash by Madame Coulomb on July 3rd, 1883.

It is quite unnecessary for us to enter here into any discussion of the various phenomena shown to Mr. Sinnet, Mr. Hume and others; those who have sufficient interest left in the subject after all that has been said about it will find, if they read Mr. Hodgson's report, that each and all of them admit of an easy natural explanation. We need refer to only one of them—the letter sent by Professor Smith of Sydney University. Madame Coulomb asserted that she unpicked the stitches of the silk with which this was sewn and fastened it up again after the Mahatma enclosure had been inserted. Professor Smith would not believe that this was possible and so Mr. Hodgson got Mrs. Sidgwick to experiment on the end that had not been opened. The result was that she was able to do exactly what Madame Coulomb said that she had done with it, whereupon Professor and Mrs. Smith were quite satisfied that the supposed evidence of "occult" agency was worthless.

It may not be out of place to state here the opinion which Mr. Hodgson formed of the truthworthiness of the evidence of the Coulombs. He says:—

"Though, of course, I have not, in coming to this conclusion, trusted to any unverified statements of the Coulombs, still neither by frequent cross-examination nor by independent investigation of their statements wherever circumstances permitted, have I been able to break down any allegations of theirs which were in any way material."

We pass now to the examination of the handwriting of the various incriminating documents. In addition to those put at his disposal by the Editor of this Magazine Mr. Hodgson obtained a number of letters, Koot Hoomi documents, &c., from other sources and submitted them to two experts for an opinion. Both of these experts, who worked quite independently, came to the same conclusion as had been already arrived at by ourselves, Mr. Gribble and the gentlemen to whom we had submitted them before publication—that they were undoubtedly written by Madame Blavatsky. The reports of these experts contain details of the evidence which led them to this conclusion. Many of the features noted are those pointed out by Mr. Gribble in his pamphlet and must be absolutely convincing to all unbiassed persons. But some of the additional evidence brought forward by Mr. Hodgson is interesting. Having obtained a fairly complete series of Koot Hoomi documents extending back as far as October 1880 he was able to trace the gradual development of the Koot Hoomi hand and the elimination of Blavatskian characteristics. A very instructive plate gives a series of fac-similes of a num-

ber of the most characteristic letters and shows at a glance this development. Now and again K. H. lapses into Blavatskian forms, even in the later letters, but so completely were these eliminated in many documents that when some of the K. H. script was first shown to the experts they did not think that Madame B. had written it. When, however, some earlier specimens were sent they had no longer any doubt, but declared that they were all written by the same hand, and that that hand was Madame Blavatsky's. Amongst the K. H. letters which were shown to Mr. Hodgson by the theosophists there were two which showed no signs of some of Madame B's chief peculiarities, while those of K. H. were very evident. A close comparison of these letters with Damodar's ordinary handwriting led to the conclusion that he was their author and this is confirmed by the circumstances under which they were received.

The attempts made by Madame Blavatsky to mislead Mr. Hodgson on various matters are well illustrated in connection with the handwriting question. Soon after his arrival in Madras Mr. Hodgson tried to obtain some admitted specimens of Madame B's writing but was refused any until Colonel Olcott and Madame B. arrived in Madras. On the request being then repeated the Colonel at once offered to get Madame B. to write him a letter. Mr. Hodgson pointed out that this would hardly answer his purpose, as he would like to have one that was written before the appearance of the September number of the *Christian College Magazine*: upon this—

"Colonel Olcott said abruptly that he could take no action as to giving me any handwriting of Madame Blavatsky's until their own Committee had met and that Madame Blavatsky was in the hands of the Theosophical Society."

Madame Blavatsky however took care that he should receive some of her recent writing by sending him replies to the first portion of Madame Coulomb's pamphlet as well as by annotating a copy for him. After comparing these recent writings with others written shortly before the exposure, Mr. Hodgson was driven to the conclusions contained in the following extract.

"I cannot help thinking therefore that the use of these English *d's* was deliberate and that they were inserted for the special purpose of misleading me in one of the most important parts of my investigation. In one or two other minor points Madame Blavatsky has also, I think, in the *B. Replies* altered her usual handwriting. If I am right in this conclusion it would follow that Madame Blavatsky has resorted to a device which an innocent person would not be likely to adopt. . . ."

Mrs. Sidgwick (wife of Professor Sidgwick) gives a report on this part of the subject from which we quote the following extracts.

"Mr. Hodgson was anxious that his statements and conclusions, as regards the handwriting of the Koot-Hoomi document and some other points, should, as far as possible, be verified in detail by some other person, and I have accordingly examined all the MSS. in question, which he has had in his hands in England, with great care, with the result that I find myself in complete agreement with him. His observations on documents which he saw only in India, I cannot, of course, verify.

. . . . . . . . . . . . . . . .

I have carefully verified every statement Mr. Hodgson makes about the acknowledged handwriting of Madame Blavatsky, and about the K. H. MSS. in England which he attributes to her. I entirely agree with all he says, and am myself strongly convinced that the same person wrote both. The development of the K. H. writing is very marked, and the gradual elimination of Blavatskian forms is, to say the least of it, suggestive. The argument is greatly strengthened by the occasional spasmodic appearance of Blavatskian forms—seemingly by accident—throughout the K. H. MSS. attributed to her—and that this is an accident, and an accident which the writer desired to avoid, is proved, I think, by the erasures and alterations. The last *k* selected from K. H. No. 3 on Plate III., which occurs in the original in the word *Greek*, is a fair instance of these alterations.

But convincing as the two considerations already mentioned are, I think the prevalence of certain peculiarities throughout both sets of documents is more convincing still, and in particular the very peculiar *a* and *g* constantly occurring in both. It so happened that when Mr. Gribble's pamphlet, mentioned by Mr. Hodgson, first reached me, while Mr. Hodgson was still in India, I had in my hands some letters of Madame Blavatsky's and a long K. H. document, and naturally turned to Madame Blavatsky's handwriting to see if it possessed the characteristics mentioned by Mr. Gribble. There, without doubt, I found among others this peculiar *a*, but it was with a shock of surprise that I found this same *a*, which I had never seen in any other handwriting, occurring even more conspicuously in the K. H. document than in Madame Blavatsky's acknowledged writing. I have seen a somewhat similar formation of *a* in the handwriting of a Russian gentleman.

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I have counted the English and German *d's* in various writings of Madame Blavatsky. It is a matter of considerable difficulty to count correctly the number of times a letter occurs in a long MS. if it is at all frequent; I am, therefore, not surprised to find that my numbers are slightly different from Mr. Hodgson's. As, however, we in *no case differ so much as 5 per cent.* it is evident that the difference is of no importance whatever to the argument, and I therefore considered that it would be waste of time to repeat the counting. The extreme rarity of the English *d* in all the acknowledged handwriting of Madame Blavatsky in our hands which has been written since the K. H. correspondence began, except in the *B. Replies*, combined with its comparative abundance in the earlier letters and in the *B. Replies*, is very striking, and it is difficult to attribute it to accident.

I have verified every statement about the letter called K. H. (Z) and about Mr. Damodar's ordinary writing, and have little doubt that the K. H. (Z) was written by him.

I have also examined the long document professedly in the handwriting of Mr. Bhavani Shankar. It appears to me to bear very evident indications of being written in a disguised hand, and to have enough of the marked, characteristics of Mr. Damodar's handwriting to point to him as the writer. I have compared the letter which Mr. Hodgson had called the 'Koot Hoomi Lâl Sing' with the quotations from it in Mr. Sinnett's 'Occult World,' and find as Mr. Hodgson does, more than 60 differences, without counting mis-spellings, changes in punctuation, &c.

It only remains to speak of the mis-spellings, faults of idiom, &c., quoted by Mr. Hodgson from the K. H. documents, and from Madame Blavatsky's own letters. I have compared all these with the originals and believe them to be correctly transcribed. More of the same kind might be adduced."

The remark about the divergence between the quotations in Sinnetts "Occult World" and the original K. H. letters refers to what seems to us an interesting illustration of the demoralizing effect of all intercourse with the Mahatmas. In the Occult World Mr. Sinnett states :—

"The reader must be careful to remember, however, as I now most unequivocally affirm, that I shall in no case *alter* one syllable of the passages actually quoted. It is important to make this declaration very emphatically, because the more my readers may be acquainted with India, the less they will be willing to believe, except on the most positive testimony, that the letters from Koot Hoomi, as I now publish them, have been written by a native of India."

Such is his statement, but what are the actual facts of the case? Mr. Hodgson writes :—

"On comparing the original document, *Koot Hoomi Lal Sing* with 'The Occult World' I find that there are more than *sixty* differences between the two (excluding mistakes of spelling—*her's* and *remarqued*—and excluding also omissions of underlinings, changes of punctuation, &c.)."

The alterations are of such a nature that they cannot be explained away by referring them to errors of copyists, or of proof readers anxious to correct the somewhat faulty English "unless," as Mr. Hodgson puts it, "we are to suppose that Koot Hoomi *him* (?) self corrected the proof for the press, in which case we ought to have been told that he did so, and how and when it was done." We are certainly surprised that one in Mr Sinnett's position should lay himself open to a charge like this, but after all what can be expected of any one who, in spite of all that has been proved, still believes in the innocence of Madame Blavatsky and the existence of the Mahatmas?

The only other part of the subject on which it seems necessary to make any remarks is the question of the underlying object which induced Madame Blavatsky to enter upon the strange course which she has been pursuing ever since she came to India. We are not prepared to say that there was any single motive, but we have long been convinced, by passages in her own letters as well as by much collateral evidence, that political motives could not be overlooked. This is a point on which Mr. Hodgson has a good deal to say and we will quote freely from his report.

"It may be supposed by some who are unfamiliar with her deficiencies and capacities that the Theosophical Society is but the aloe-blossom of a woman's monomania, and that the strange, wild, passionate, unconventional Madame Blavatsky has been 'finding her epos' in the establishment of some incipient world-religion. But a closer knowledge of her character would show such a supposition to be quite untenable; not to speak of the positive qualities which she habitually manifested, there are certain varieties of personal sacrifice and religious aspiration, the absence of which from Madame Blavatsky's conduct would alone suffice to remove her ineffably far from the St. Theresa type.

As Madame Blavatsky *in propria persona* she can urge her followers to fraudulent impersonations; under the cloak of Koot Hoomi she can incite 'her' Chelas to dishonourable statements; and as an accomplished forger of other people's handwriting, she can strive to save herself by blackening the reputation of her enemies. She is, indeed, a rare psychological study almost as rare as a 'Mahatma'; she was terrible exceedingly when she expressed her overpowering thought that perhaps her 'twenty year's' work might be spoiled through Madame Coulomb; and she developed a unique resentment for the 'spiritualistic mediums' whose trickeries she said she 'could so easily expose,' but who continued to draw their disciples while her own more guarded and elaborate scheme was in danger of being turned inside out.

. . . . . . . . . . . . . . . . . . . .

At last a casual conversation opened my eyes. I had taken no interest in Central Asian perplexities, was entirely unaware of the alleged capacities of Russian intrigue, and had put aside as unworthy of consideration the idea—which for some time had currency in India—that the objects of the Theosophical Society were political, and that Madame Blavatsky was a 'Russian spy.' But a conversation with Madame Blavatsky, which arose out of her sudden and curious excitement at the news of the recent Russian movement upon the Afghan frontier, compelled me to ask myself seriously whether it was not possible that the task which she had set herself to perform in India was to foster and foment as widely as possible among the natives a disaffection towards British rule. Madame Blavatsky's momentary emotional betrayal of her sympathies was not rendered less significant by the too strongly-impressed 'afterstroke' of a quite uncalled-for vituperation of the Russians, who, she said, would be the death-blow of the Society if they got into India."

After some account of Madame Blavatsky's former life with which

our readers are already sufficiently well acquainted, Mr. Hodgson goes on to say :—

"She afterwards spent eight months in India and then proceeded to America for what would appear to have been the express purpose of becoming an American citizen 'for the sake of greater protection that the citizenship of this free country affords.'"

The fact of her being an American citizen was, it will be remembered, urged more than once as an evidence of her trustworthiness by injudicious friends. Colonel Olcott himself wrote and apparently italicised the following sentence in a letter from New York to a Hindu in 1878 :—

"*While we have no political designs, you will need no hint to understand that our sympathies are with all those who are deprived of the right of governing their own lands for themselves. I need say no more.*"

And Madame Blavatsky wrote to the same person :—

"Is our friend a Sikh? If so, the fact that he should be, as you say, 'very much pleased to learn the object of our Society' is not at all strange. For his ancestors have for centuries been—until their efforts were paralysed by British domination, that curse of every land it fastens itself upon—battling for the divine truths against external theologies. My question may appear a foolish one—yet I have more than one reason for asking it. You call him a Sirdar—therefore he must be a descendant of one of the Sirdars of the twelve Mirzals which were abolished by the English to suit their convenience —since he is of Amritsir in the Punjab? Are you personally acquainted with any descendant of Runjeet Singh, who died in 1839, or do you know of any who are? You will understand, without any explanation from me, how important it is for us, to establish relations with some Sikhs, whose ancestors before them have been for centuries teaching the great 'Brotherhood of Humanity'—precisely the doctrine we teach. . . . . . . .
As for the future 'Fellows' of our Indian Branch have your eye on the chance of fishing out of the great ocean of Hindu hatred for Christian Missionaries some of those big fish you call Rajahs, and whales known as Maharajahs. Could you not hook out for your Bombay branch either Gwalior (Scindia) or the Holkar of Indore—those most faithful and loyal friends of the British (?) The young Gwikovar is unfortunately scarcely weaned as yet, and therefore not eligible for fellowship."

It is not difficult to read between the lines in this letter but still less ambiguous is the following fragment which, however, it is only fair to state, Madame B. says is probably a translation from a Russian work.

"Military men more than any other, must remember that the approaching act of the Eastern drama is to be the last and decisive one. That it will require all our efforts, every sacrifice on our part, and requires far more careful preparations in every direction than did the last war. They must remember,

that to sit idle now, when every one has to be busily preparing, is the highest of crimes, a treason to * their country and their Czar.

" He who hath ears let him

After saying that, while personally he has little doubt that Madame B's real object was the furtherance of Russian interests, he has mentioned it in his report simply as giving the best explanation of the various incidents in her career during the last 13 or 14 years, he concludes as follows :—

"That she is a remarkably able woman will scarcely be questioned by any save those of her followers whose very infatuation of belief in her 'occult relations' is perhaps the most conspicuous proof of that ability which they deny; and it would be no venturesome prognostication to say that, in spite of recent exposures, she will still retain a goodly gathering of disciples on whom she may continue to inculcate the ethics of a profound obedience to the behests of imaginary Mahatmas. The resources of Madame Blavatsky are great; and by means of forged letters, fraudulent statements of *Chelas*, and other false evidence, together with the hypothesis of Black Magicians, she may yet do much in the future for the benefit of human credulity. But acting in accordance with the principles upon which our Society has proceeded, I must express my unqualified opinion that no genuine psychical phenomena whatever will be found among the pseudo-mysteries of the Russian lady *alias* Koot Hoomi Lal Sing *alias* Mahatma Morya *alias* Madame Blavatsky."

To this we may add the finding of the Committee :—

"It forms no part of our duty to follow Madame Blavatsky into other fields. But with reference to the somewhat varied lines of activity which Mr. Hodgson's report suggests for her, we may say that we cannot consider any of these as beyond the range of her powers. The hommage which her immediate friends have paid to her abilities has been for the most part of an unconscious kind; and some of them may still be unwilling to credit her with mental resources which they have hitherto been so far from suspecting. For our own part, we regard her neither as the mouth-piece of hidden seers, nor as a mere vulgar adventuress; we think that she has achieved a title to permanent remembrance as one of the most accomplished, ingenious and interesting impostors in history."

The result of Mr. Hodgson's investigation has been to confirm, in every particular, the conclusions at which we had arrived before we published our first article. He has of course been able to work up many of the details which lay beyond the limits of what we had set ourselves to discuss, and the peculiar facilities granted him at the headquarters enabled him to obtain a mass of collateral evidence which ought to carry conviction with it even to the most sceptical. But we confess we have great doubts if it will do so.

* The letters "Ru" are here crossed out.

Those who had not committed themselves too deeply were completely convinced by what we published in 1884, and the rest had their faith in Madame Blavatsky so much shaken that we heard little of her and her wonders for more than a year. Yet at last anniversary the President Founder ventured to speak as if all the charges of fraud had been exploded and Madame's somewhat tarnished character had been completely rehabilitated. According to Madame Blavatsky, Colonel Olcott once declared to her "*If even you yourself were to tell me that the Mahatmas do not exist and that you have tricked in every phenomenon produced by you, I would answer you that* YOU LIE *for we know the Mahatmas* and know that you could not—no more than fly on the moon—have produced certain of the best of your phenomena."*

To those who are so unfortunately constituted that the truth is the only marvel that they cannot believe no amount of proof can bring conviction, but hereafter none who have any self-respect can have anything to do with the Theosophical Society until it separates itself completely from fraud and trickery and from those who have taken part in the production of those spurious phenomena of which we sincerely hope we have heard the last.

We would only add that Mr. Hodgson has carried out his investigations and drawn up his report in a very thorough and able manner. And we must congratulate the Society for Psychical Research in having brought one at least of their investigations to a successful conclusion.

## LITERARY NOTICES.

*Types of Ethical Theory*, by JAMES MARTINEAU, D.D., LL.D. First notice.

The author of this work is eighty years of age. It is not often that such a work comes from a man of so many years. We might go further, and say, that it is not often that such a work is given to the world at all. The *Spectator* is of opinion that no other work on Ethics of equal importance has been produced in English, since the days of Bishop Butler. Whether this estimate be true or not, there can be little doubt

* Volume II, p. 314.

of this, that in these two volumes, we have a contribution to Ethical study of very great value.

Dr. Martineau is eminently fitted to deal with Ethical and Philosophical subjects. He is a man of great natural endowments and of equally great industry. He has been a teacher in these and kindred subjects for nearly half a century. There have been teachers of such cast of mind, and habit of work, that half a century's work, instead of qualifying them for doing a work like this, would render them the most unfit for its performance, who could go on reading one set of lectures, year after year, without adding or altering anything to bring their work into harmony with new developments of thought. But Dr. Martineau is not of this sort. He has a mind ever open to new truth, from whatever quarter it may come, and he is not ashamed to confess that he has been compelled to recast his thought again and again, as new light dawned upon him from without, or new needs arose for him from within. His sphere of work has been mainly in 'Manchester New College,' the college of the English Unitarians—a college that maintains "the principle of freely imparting theological knowledge without insisting on the adoption of particular theological doctrines." In his very interesting preface Dr. Martineau gives the following picture of his method as a teacher. He says:—

"It fell to my lot to be always *teaching* these subjects; and *that*, not merely as a lecturer to an inexpert audience too ready to take my word, but as a tutor to students, not always my juniors even, and often of keen intellectual discernment and insatiable thirst for the deepest draughts of truth. A lonely writer on speculative problems, taking his own way, chooses probably the line of least resistance, and makes it more his beaten track than ever; but under a fusillade of questions from a class of sharpshooters, the instructor has to look well to his defences, perhaps to fall back upon less exposed ground; is at all events tested by a perpetual dialectic, in which to learn his weakness will be his best gain of strength."

Again he says—

"I have always been a teacher; I have not ceased to be a learner."

Dr. Martineau informs us that he meant at one time to issue a preparatory work on the theory of knowing, as a groundwork for his ethical theory, but that he gave up the idea, and put forth the ethical work to speak for itself. In dealing with typical writers on ethics, however, he takes their ethical theories in connection with their philosophical theories, and regards their main errors as arising from wrong theories of knowing, and from giving undue prominence to one or other of the objects of knowledge, or from treating these objects in a wrong order. For ethical study cannot be carried on by merely studying man abstractly. He must be studied in connection with the objects around him.

"What these objects are that constitute the scene around him may be expressed in two words—Nature and God;—understanding by the former the

totality of perceptible phenomena; and by the latter, the eternal ground and cause whose essence they express. These two are the companions that no one can ever quit, change as he may his place, his age, his society; they fill the very path of time on which he travels, and the fields of space into which he looks; and the questions what they are, and what exactly they have to do with him, cannot but affect the decision of what he ought to be."

The objects that must be studied, in order to arrive at a right ethical theory are man, nature and God. It is no easy task to give each of these three subjects its proper study, and to set each in its proper place as over against the other two. Matthew Arnold seems to think that Goethe did something like justice to all the three, but thinks that hardly any besides have done it, or can do it—for he says :—

> ". . . Goethe's course few sons of men
> May think to emulate.
> For he pursued a lonely road
> His eyes on nature's plan,
> Neither made man too much a God,
> Nor God too much a man."

Whether Dr. Martineau would agree with Mr. Arnold in his estimate of Goethe's course or not, he would agree with him in thinking that few of the sons of men have succeeded in giving nature, man and God their due. He finds rightly that most have fallen into error either by carrying conceptions gained in the study of one of these objects into the study of the other, or by confining attention to two of the three, and neglecting the third. It might seem to be matter of indifference at which point to begin as between man and nature. But Dr. Martineau finds that as a matter of fact it makes a great difference.

" In the last resort, the difference, I believe, will be found to consist in this; that when self-consciousness is resorted to as the primary oracle, an assurance is obtained and is carried out into the scheme of things, of a free preferential power; and when the external whole is the first interrogated, it affords no means of detecting such a power, but, exhibiting to the eye of observation a course of necessary evolution, tempts our thought to force the same type of development upon the human soul. In the one case we obtain a volitional theory of nature; in the other a naturalistic theory of volition; and on the resulting schemes of morals the great difference is impressed, that according to the respective modes of procedure, the doctrine of proper responsibility is admitted or desired."

It is from this that Dr. Martineau derives his first distinction of method. The method that begins with the study of man he calls the Psychologic, and the method that begins with what is external to man he calls the Unpsychologic method. The first volume, with which this notice deals, is devoted to those types that have adopted the Unpsychologic method.

But while these types agree in taking the 'external whole' as the first

object of study, they differ widely from each other in the way they regard that 'external whole.' When we lay aside for the moment :—

"The conception of nature as a creation at a certain date, and of God as its personal author existing before and without it, and look forth afresh through the young eye of heathen wonder, we find, that our thought seizes with instinctive persuasion, on two opposite aspects of existence,—that which *appears* and that which *is*—the transient phenomena and the abiding ground—the moving succession of actual change and the still potencies and permanent entities from whose depths they come."

Of course the question may be always raised "Are we competent to know anything but phenomena?" And it will be always open to men to deny it. The systems that "begin with assuming real, eternal, intellectual entities, and thence descend into the human world" are called metaphysical systems—and those systems that assume that there are or can be known only phenomena and their laws, are called physical systems.

Metaphysical systems are again divided into Transcendental and Immanental. Those systems are called Transcendental which maintain that "God is greater than Nature; and his resources of perfection are not exhausted or fully expressed in the organism of the visible universe." Immanental systems are those that maintain that "Nature is every way co-extensive with God; is simply the appearance of His essence—an essence intrinsically capable of being latent; and does *exhaust*, in the sense of fully covering, the whole ground of His resources, moment by moment, though leaving still a fertility in reserve adequate to eternal demands." That is, unpsychological systems of Ethics are divided into metaphysical and physical systems. And again he has divided his metaphysical systems into Transcendental and Immanental. He takes Plato's system as his type of a Transcendental ethical system, Spinoza's as his type of full blown Immanentalism—and Comte's as the type of the Physical system. He also discusses under Immanental ethics the systems of Descartes and Malebranche as preparing the way for Spinoza.

No one can read Dr. Martineau's expositions and criticisms, without taking away the impression that here we have the work of a thorough student, and of one who desires to deal fairly with every system. Indeed Dr. Martineau is not slow to acknowledge obligation to men who differ widely from himself. He says in his preface "Of the many authors passed under review in these volumes, I do not remember one to whom I am not grateful for intellectual service or delight." Yet, for all his fairness and thoroughness, and for all his desire to find good in the systems he deals with, Dr. Martineau fails to find in Unpsychological systems "an adequate base for the indispensible postulates of ethical doctrine." The reason of this is, that none of these systems makes man a being capable of responsibility. and guilt, in any real sense of these words. Plato fixes upon the right kind of men as good man, but they

are good because, "by a happy infection or infusion, more of the essence of the universe has got into them than into others." When put in this way, the doctrine just means that we can no more give a man any credit for being good, than we can give him credit for being good-looking; and that we can no more blame a man for being bad, than we can blame him for not being so good-looking as another. Spinoza, again, holds that nothing is possible except the actual, either for God or man. It is very manifest that the indispensable postulates of ethical doctrine cannot be found here. If we were to adapt the words of Matthew Arnold already quoted we might say that Spinoza's system is guilty of a double error. It makes God too little a God, and man too little a man. Comte puts God out of account altogether and also metaphysics. We know and can know nothing but phenomena. It is equally clear that no proper ethical doctrine can be found here. Yet Comte gives many very wise and noble moral counsels, though his system provides no proper base for them. But Dr. Martineau is always glad to find and to point out, that the men were better than their theories.

"With a noble inconsistency, all the great writers whose doctrine we have studied, betray the tenacious vitality of the intuitive consciousness of duty, throughout the very process of cutting away its philosophic roots; and Plato, in his 'divine wrath' at the tyrant flung into Tartarus; Malebranche, self-extinguished in the absolute holiness; Spinoza lifted from the thraldom of passion into the freedom of infinite love; Comte on his knees before the image of a Perfect Humanity, are touching witnesses to the undying fires of moral faith and aspiration."

All that has been said gives only a mere hint of the contents and value of this important volume. We hope that it will find many careful readers in India. In Dr. Martineau the Materialistic school has perhaps its ablest English opponent.

A notice of the second Volume will appear in a future number.

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*A Sketch of the History of Hindustan from the first Muslim Conquest to the fall of the Mughol Empire* : by H. G. KEENE, C.I.E., M.R.A.S. London, W. H. Allen and Co., 1885.

The title of this book is somewhat a misnomer. The outline of the history of the early Muhammedan dynasties occupies only twenty-eight pages out of a total of nearly five hundred, and goes little deeper into the subject than an ordinary school manual. It has evidently been written merely to give an apparent justification to the name. For the period, however, from the invasion of Baber to the full establishment of British power, the work is certainly the best existing *resumé* of the history of Northern India. A good deal of the matter contained in it has been given to the public by Mr. Keene in

other works already; but it has been moulded here afresh into a coherent and interesting whole. The picture presented of the palmy days of the Mughol Empire leaves little to be desired. It sets the character and deeds of the Emperors and their chief ministers and officers, especially of Akbar and the remarkable group of men who surrounded him, in a vivid and, as we believe, a just light. It can be read with much pleasure as well as profit, and leaves a distinct and correct impression on the reader's mind.

We cannot speak so favourably of the second of the two books into which the work is divided,—that which deals with the century of misrule and disruption which intervened between the death of Aurangzebe and the triumphs of Wellesley and Lake. The subject is of course a difficult one. Anarchy and chaos hardly admit of lucid or interesting description. Still, by turning attention more upon the really important points and by a more carefully studied digestion of his materials, Mr. Keene might have found it not impossible to produce a narrative which would have some chance of fixing itself in the memory. As it is, the reader is bewildered with countless unfamiliar names of men without principle and battles without result, until the narrative becomes too faithful a reproduction of the chaos which it endeavours to describe. The historian of such a period, if he wishes for any credit from his labours, must make an order if he does not find one. In history as in other things, an artificial classification, however much inferior to a natural one, is vastly better than none at all. Still, as a book of reference if not as a specimen of successful historical writing, even this part of the volume is meritorious and useful.

We notice a curious departure from ordinary modes of printing. At the end of many of his chapters, Mr. Keene gives a summary, sometimes accompanied by criticism, of the authorities he has mainly relied on. The paragraph in which he does so is printed in the same type as the text and reads consecutively with it. The only way in which it is marked off is that sometimes it has the word NOTE, in large capitals, at its commencement, and that at other times it is enclosed in brackets. This is certainly innovation, but as certainly it is not improvement.

The style of the work, if matter of fact and too prone to unnecessary parenthesis, is fairly accurate and tolerably harmonious. One of its mannerisms we hope to see corrected should a second edition be called for,—as we think it ought to be. There is a constant and very annoying reference forwards and backwards in the narrative. When a new actor is introduced some phrase like "of whom we shall hear more," is constantly interpolated. When a simple statement is made, some parenthesis like "as we shall see hereafter," too frequently accompanies it. When an event already mentioned, perhaps mentioned on the previous

page, is referred to, some expression like "as we saw," is constantly intruded. Do writers on Indian subjects regard their theme as so devoid of interest that their readers must have their memories continually jogged in this fashion? Certainly there are others of these writers as well as Mr. Keene,—Colonel Malleson for example,—who indulge in this habit to an extent that is decidedly exasperating.

We regard the book before us as, on the whole, a very successful summary of matter with which every one who has interest of any kind in India ought to be familiarly acquainted. If it deals too much with the mere outside of history,—with the intrigues of courts and the shocks of armies—and too little with the state of the people, with the feelings prevalent among them and the character formed within them at each period as it passes in review, the fault lies mainly not with the author but with the great paucity of material at his disposal.

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*Hints on the Study of English.* By F. J. Rowe, M.A., and W. T. Webb, M.A. New Edition revised and enlarged. Calcutta, 1885. Rs. 2-8.

Little requires to be said with regard to this volume. Previous editions have already made it familiar to Indian students, and its large circulation of forty-one thousand is sufficient proof that it has met, to a large extent at least, the need it was intended to supply. Every teacher of English in an Indian School or University feels the want of a text-book on English composition, which will meet the peculiar needs of the student, and though it cannot be said that such a text-book has yet been provided, it will be generally admitted that this volume of Messrs Rowe and Webb goes far to supply the deficiency.

The changes introduced into this edition are such as further experience of these needs has suggested, and will be the means of materially increasing the value of a volume which has already done good service in the cause of education. The text has been re-written, and simplified, with the view of its being more serviceable to the younger student. The change of type and, so far, of arrangement, presenting the rules and exceptions more in tabular form, renders it more suitable for reference.

In addition to these general changes, particular portions are almost entirely new. Among these we may mention the additional matter bearing on the subject of idiom. The subject is a difficult one, and the teacher can do little more than guide the pupil by general hints. In this connection specially deserving of mention is the full and careful discussion of the idiomatic use of prepositions. Each preposition is looked at separately, and its uses arranged in a systematic and exhaustive way. One of the most valuable additions to the student, however, is that of the appendices which consist of lists of words illustrating at length some of the principles referred to in the text.

The care and toil so manifest in the former editions is still more visible in the present, and the new study and labour expended on it cannot fail to increase its usefulness.

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THE ASYLUM PRESS ALMANAC *for* 1886. *Madras : Lawrence Asylum Press.* Rs. 5.

This volume is so well known that it is hardly necessary to say more than that it is quite up to the standard of excellence of former years. It is full of well arranged information of every kind which has, so far as we have been able to test it, been brought well up to date. But we have one fault to find with it, and we mention it with the hope that it will be removed in coming years, the table of contents though decidedly better than formerly still leaves something to be desired. It is certainly a very difficult matter to make a good index, but considering that the contents of this volume vary little from year to year, it would seem quite worth while to take some trouble to get one that would be above criticism.

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THE BOMBAY CHRISTIAN ALMANACK *for* 1886. *Bombay : Bombay Tract and Book Society.* 8 annas.

This is a tastefully illustrated annual which does credit to the enterprise of the Bombay Tract and Book Society. In addition to the ordinary contents of an almanac it contains a number of carefully selected extracts and short articles on subjects of interest. A number of pages are devoted to missionary statistics consisting of "a descriptive list of the principal Bombay Missionary, Religious, Benevolent and Educational Societies with statistics of their progress during the past year." Purchasers are certainly given good value for their money.

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VEST & COMPANY'S MADRAS PEOPLE'S ALMANAC *for* 1886. *Madras : Vest & Company.* Re. 1.

This contains in a condensed form a great mass of useful information. It cannot of course compete with the larger almanacs, but those who cannot afford to pay the comparatively high price charged for them will find most things which they require in this cheap volume. We are sorry to note, however, that it is not in all cases brought up to date, where changes have taken place towards the end of the year. In future years we would advise the compilers either to omit altogether the "Philosophical Facts" or else to get some one who knows something about them to collect them.

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*First Lessons in Geometry*, for the use of technical, middle and high Schools, by B. HANUMANTA RAU, B.A., Madras : Addison and Co., 1885.

The author of this little book says in his preface that he has not

produced the book with the usual object of supplying some *long-felt want.* We think, however, that he has justified his appearance as an author considerably better than most of those who write for the youth of India. With the general type of books published in this country as aids in the preparation for examinations we have little sympathy; indeed, the only recommendation that most of them have is their cheapness. They and the examinations for which they are prepared are no doubt greatly to blame for that system of cram in every department of knowledge which the author of the present volume complains of in the subject of geometry.

The book is an attempt to present the elements of geometry in a more practical light than is generally done, a method which is certainly needed in India; and on the whole we think the author has carried out his purpose well. The first chapter is intended for the guidance of the teacher, and gives a list of the apparatus necessary for teaching the subject as well as directions for making paste-board models of the elementary solids. The next chapter is on *solids*, *surfaces*, *lines* and *points* which are considered in the order given. The treatment is clear, and beginning as it does with the concrete should enable pupils to realize without much difficulty what these words stand for. Straight lines and circles are then treated of, after which are given the usual axioms, the truth of some of which, however, had previously been assumed.

The idea of an angle is derived from that of revolution, and the nature and comparison of angles is studied with the assistance of circles. In the remaining chapters the elementary properties of triangles, polygons and parallels are discussed and the subject of areas is considered. Practical problems are given in connection with each subject.

The enunciations are generally clear and the demonstrations short, two qualities which cannot be too highly valued. In a few cases, however, the connection is not very evident, as in the following:—"O is the common centre of two arcs of circles, OAB and OCD are two straight lines drawn to meet them, A,C being on one arc and B,D on the other. (1) Prove that the triangle OAD=triangle OCB, (2) Compare the hypothesis of this theorem with the qualities of a good pair of compasses." A good many, we think, will be puzzled to know what answer to give to (2).

We should very much like to see students in India less dependent on books such as are usually prepared for them, but we think the present work has a good deal more to say for itself than most others whether produced by European or Native authors.

*Son Gruel* or what He met, i' the Mofussil. Canto, I. Calcutta, Thacker, Spink & Co. 1885.

The author of the poem with this very remarkable name, has not ventured to place his own on the title page. Only the first canto has as yet been published. This consists of no less than two hundred and twenty-three stanzas, written in the *terza rima* metre, so familiar to us from Lord Byron's Beppo and Don Juan. We do not know how many cantos are to follow, but if the story is to progress at the same rate as it does in the first canto, there must be at least a dozen more to come. But perhaps, like Canning's knife grinder, the author has no story to tell, and merely wishes to take advantage of the gossiping *terza rima* verse to enable him to discourse upon all things in Heaven and Earth, *et quibusdam aliis.* The present canto is in fact a *farrago,* treating of everything ranging between Shakspeare and musical glasses. We are merely told that the Hero (written with a big H if you please,) is the son of a General commanding the force at *Begra,* clearly meant for Agra. He is, we are glad to learn, a really good young man and the object of the poem is to tell us,

> "...what funny folk or asses learned
> He met."

As far as the first canto is concerned he meets no one not even a learned ass, and the 223 stanzas are taken up in the discussion of every possible topic, many of which are *apropos des bottes.* The task the anonymous author has set himself, is an ambitious one, but it is one that if well fulfilled should make a noble poem, for which the metre selected is by no means inappropriate; a series of sketches of India from Peshawar down to Cape Comorin, strung together by just so much story as to make the whole interesting, is an object worthy of any poet's ambition. And we must admit that the author of *Son Gruel* is possessed of very considerable poetical power. His versification is easy and occasionally he attempts a higher flight. For instance the subject of war, apropos of the Hero's father being a General, leads him to sing about the various disasters that war brings in its train. The subject is not original, but the following verse, with the exception of the last line is pretty :—

> You little thought, as bravely in your ear
> "Sweetheart," he whispered, "but a little while,
> Mayhap before the closing of the year,
> My kiss shall light thy sorrow into smile;
> Be brave for what's unborn, be of good cheer.
> Its love shall all your lovely hours beguile:"
> 'Tis past: those lips have still remained unkissed,
> His name is placeless in the Army list.

This verse is a very good illustration of the whole poem, as far as it is

before us. Combined with a considerable amount of poetical talent, there is an air of flippancy about the whole which is very disappointing. One cannot help feeling that the author could have done better, and that what he has given us is for the most part effervescent froth. Of what kind the liquor behind may be we have yet to judge. As the author leads us to expect some more instalments we may be pardoned for offering a few suggestions. There is no reason why in adopting the *terza rima* metre, he should also try to imitate Byron's style. Byron's method of treating this metre is inimitable, but *Son Gruel* halts an immeasureably long way behind Don Juan; it has all its discursiveness, but none of its pithiness and originality, and not even any piquancy to relieve the monotony of the poet's soliloquies. All through this the imitation is painfully apparent. A second suggestion is that the author should draw his tap of ethics mild. Ethics may be a very good thing in their way, but when out of a poem of two hundred and twenty three stanzas only fifteen and a half are devoted to the story itself, and the remainder to the poet's rhapsodies, and there are still—how many—cantos to follow—even the most conscientious reader is apt to get wearied. One last suggestion we would also very humbly make and that is that after the trouble of writing 223 stanzas, and the labour of reading them, there should be something, just something left. As regards the first canto we regret to say that there is nothing except a sense of weariness and disappointment. We do not however despair. The author can do better if he likes and perhaps has intentionally refrained from serving out his best wine at first, and has therefore given us the milk and water effusions which he has not inaptly called *Son Gruel* otherwise the name would be unintelligible.

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THE FIRST TAMIL NOVEL :—*The Story of Prathapa Muthaliar*: by S. VETHANAYAGAM PILLAY, District Munsiff, Mayaveram. Madras: Scottish Press, 1879.

In these days when our vernaculars are at a discount the appearance of this Tamil novel should be hailed with joy. "One swallow does not make a summer," says the proverb, yet it may be the herald of sunny days, and as such deserves to be greeted by a cordial welcome. Such a welcome must be given to this novel, which though it cannot constitute a new literature marks the coming of a new era. It need hardly be said that the British Government has never aimed at nor desired the decay of Ṭamil literature, yet it remains true that during the period of English supremacy, vernacular literature has not flourished, but declined. Probably it was inevitable that for a time at least the vernacular should go out of fashion, that 'the old' should give place to 'the new.' And a new literature cannot be created until the new thought has had time to take

possession of the popular mind. As yet the Hindu mind does not appear to have been very deeply stirred by the thought of the West, else the literary field could hardly have lain fallow so long. Hindus have concerned themselves more with English speech than English thought, otherwise new feelings and convictions would ere now have found expression in some form of literature. Literature cannot be expected to flourish until men once more learn to love the vernaculars. Doubtless this will happen in due time; men will come back to the vernacular and count the sweet Tamil sweeter than all other tongues, and the new thought will shine forth in the old language. It ought to be added that though Tamil literature has declined, the language itself has suffered no injury. On the contrary it has been enriched and made more exact than before, for during the period referred to, lexicography and grammar have received attention, and printing has been introduced. Nor must it be forgotten that during this period also, prose composition has been introduced, and hereafter the men of South India may venerate Thandavaraya Muthaliar, the father of Tamil prose, as Englishmen venerate the 'father of English poetry.'

The writer of this novel, Mr. Vethanayagam Pillay, besides being our first Tamil novelist has other claims to popular esteem. He is one of the best of modern Tamil poets. Some of his best known works are the following; Nîthinûl, Siddhânta Sangraham, Peṇmâlei, Peṇkalvi and Peṇmânum. Readers may be inclined to question his claim to be the first Tamil novelist, but so far as we know, the claim is perfectly just. It is true that the immortal Beschi wrote the "Adventures of Guru Paramartan," a book made familiar to Englishmen by the pencil of Alfred Crowquill, and we have also seen another little book published some twenty years ago in verse which the author designates a Tamil novel. But the term will be far more justly applied to the work before us than to either of these. The only other work of fiction which deserves mention is the translation of "Undine", which originally appeared in the pages of the "Dinavartamâni." But this is a European tale. The present novel, Prathapa Muthaliar, was published seven years ago, and is now out of print. It is a volume of three hundred and thirty pages, admirably written, and full of purity of sentiment and sound wisdom. It is an excellent book to place in the hands of our Tamil young men, is calculated to stir their thought on many subjects, and reveal to them the weaknesses of our time. The writer is not afraid to speak aloud his views on important questions both social and political, and as they are the views of one possessing much intelligence, considerable experience as a Government official, added to an intimate knowledge of native social life, they are entitled to a respectful hearing. The story into which all these are woven is full of interest, and thoroughly Hindu; we follow Prathapa Muthaliar through childhood and youth on to his marriage and the chequered events of later years,

and he is by no means the solitary object of interest to be found in the story; his wife Gnanambal, Kanaka Sabei, and others make up a series of excellent characters, which cannot fail to delight the reader. We were especially pleased with the narrative of Prathapa's childhood and education, the character of his easy going father and his indulgent grandmother are admirably delineated. English readers cannot fail to learn much from the author's glimpses of the inner life of a Hindu family. Here is a little incident of Prathapa's boyhood which will interest our Hindu readers. He says :—

"Kanaka Sabei and I, and a few other boys being ambitious to become very strong men, practiced fencing for a time, and one night having practised until a late hour, on our way home we came upon some players on the maidan acting the history of Rama. When we arrived on the scene, Rama and Seeta and Lutchman were just about to go to the jungle, and Dasaratha Kousali and all the people were lamenting bitterly. Turning to Kanaka Sabei I said, 'You see Rama has lost his crown by that wicked Keikasi, and now he must go to the jungle, and the people are broken-hearted. Is it right to allow all this to happen? We mustn't stand still and permit it, let us prevent it.' So at once we and the other youths with fencing sticks in our hands, climbed over the heads of the people and got upon the stage. We surrounded Keikasi who was sitting with her elder sister waiting for the coronation of her son, and we beat them until we were tired. Finally she ran off exclaiming, 'I don't want the crown for Baratha!' If we could only have caught Kuni just then, I think we should have sent her to the world of Yama, but she was lucky enough to escape. We ordered Rama who was going to the jungle, to go back to the city. 'But I must go to the jungle,' said he, 'that my father's word may not be broken.' 'If you go,' said I, 'we will break your legs.' So we blocked his way, and dealt out justice to him, saying, 'Your father called you, and ordered you to be crowned, and you consented to it. Besides, it was proclaimed in all the towns and villages, and since this has been done, what right has he to give to Baratha the kingdom which he gave to you? If he do so will he not become a liar? Only if you wear the crown will your father's veracity be maintained. Doesn't Kamban say

'A kingly nature first to me was given
My father next the kingdom gave. If riven
From me that to a younger brother's hand
It pass; then tell me how his truth can stand?'

So go home to your city.' Probably fearing my stick even more than my tongue the actor Rama obeyed. So at once I called Vashishta and the others, and had Rama crowned, and in this way reduced the seven Khandas of the Ramayanam to one and a half. Rama, his younger brother and Seeta did not go to the jungle. Dasaratha did not die. Ravana won no bad reputation by sending Seeta into captivity, and Rama no reproach by killing Ravana and other Rakshasas, and the little child Baratha was saved from the burden of the kingdom. Thus I made my name enduring as 'Prathapa Mudaliar.'" (pp. 13-14.)

Prathapa was singularly fortunate in having his fair cousin as a school companion, and a wise man as his teacher. The following are some of his counsels to Prathapa at the close of his school days :—

" To say that a teacher gives his pupils perfect knowledge is incorrect ; he only shows him how to obtain it, as one shows the way to a village. It is the duty of the scholar who has been shown the way, to perfect his knowledge by continuing to study both day and night. He who thinks school learning enough without subsequent study, is like one who thinks the foundation sufficient without building the house. I have put in your hand the key of the treasure-house of learning, and taught you to understand the meaning of whatever book you read: hereafter you yourself must open that treasure-house by your own efforts, and enjoy what is within. I can do nothing more for you If you wish to know the meaning of difficult words there are dictionaries and other books to give you aid. Tiruvalluvar, Kamban and other learned men became great poets only by their own efforts ; they learned but little from their teachers. And those learned men were not divine, they were all of human birth. If like them you also exert yourself, what need hinder you from becoming equal to them in your attainments ? The end of all knowledge is to know God." (p. 64.)

One of the saddest chapters in the work before us is Chapter XVI. on " the Cruelty of a Hindu mother-in-law." It is the story of Andichi Ammal and it exhibits in a truthful light the not unusual horrors of life with a mother-in-law in India. Some time ago the writer of this novel called our attention to a newspaper report of cruelty very much akin to what he has depicted here, atrocious enough. Andichi Ammal by the fiendish efforts of her mother-in-law, was separated from her husband, and asserted to be mad. Even her husband, weak and at his wits end, finally believed that she was mad. She says :—

' I wept the whole night, and filled the room with my tears. Next day the doctors and sorcerers assembled. All the doctors affirmed that I was mad. The sorcerers declared that I was possessed of a devil, and one of them indeed said that there were a hundred and eight devils in me. When I heard that, I became angry and threw at the speaker a stone which lay there, and this act of mine was accepted by them as conclusive evidence that I was possessed of a devil. They seized me, manacled my hands and feet, and shaved my head. My one tongue cannot tell the awful punishments which the doctors and sorcerers inflicted on me. I pleaded, Why are so many Yamas needed to take one life ? I have neither madness nor devil. Why do you torture me without cause ? But though I used every effort to move their pity, it was all in vain." (pp. 94, 95.)

She was at last rescued from all this by the arrival of her father, to whom she had never made known her sufferings, because " it is not becoming for a virtuous woman to make known to her father the evils which happen to her in her husband's home."

One of the sharpest and most timely Chapters in the book contains the story of an " Educated Hindu," a poor Brahman fed and educated by

charity, who usually spoke to his father and mother through a dubash. He knew but a little English and less Tamil, and strove hard to Anglicize himself in every way, and finally succeeded in reading a number of English books, concerning which the writer's remarks are of interest. He says:—

"Although there are many good books in English, Anantha Iyan neither bought nor read these. But he read Lecky, Leslie Stephen, Bain, Darwin, Comte, Stuart Mill, Herbert Spencer, Huxley, Hume, Collins, Tyndall, Voltaire and others opposed to religion, and came to believe that there, is no God, no revelation—neither sin nor goodness, neither heaven nor hell. 'Worldly good is the chief thing,' such was the sum of his faith. The above mentioned writers against religion are agreed that a religion is necessary to the world, and that only evil can happen where religion is not found. Accordingly, Voltaire built a church, Hume went to church sometimes, Collins compelled his servants to attend church that they might be kept from theft and murder, and Huxley exerted himself to get the Bible read by children in schools. If any one should call Tyndall an enemy of religion be would be angry. Thus the books of these learned men teach one thing and their conduct another thing. But Anantha Iyan's speech and conduct were the same. And as if his own acceptance of the creed, which says 'there is no God, no sin, no goodness,' were not enough, he began to teach it to his wife, children and others. Having himself led an evil life he began to show them the way. His only God was money, to obtain which he thought any impiety might secretly be done; but finding that the way to obtain employment and money is by seeming to be an honest man, he assumed this disguise, and finally obtained employment as a District Munsiff." (p. 167 ff.)

He ran his evil course, grew ashamed of his parents, and was deserted by his wife and family. Finally, his atheism was ended by a visit from thieves who carried off his wealth and proved better teachers than parent or priest.

It would occupy too much space to give anything like a complete summary of this admirable novel. The hero and his excellent wife eventually become rulers of a state; *i.e.*, Gnanambal becomes the Sovereign and her husband Viceroy. The result to us is that in Chapters XXXVIII and XXXIX we find the writer making good use of his knowledge of India's needs, a knowledge obtained from personal experience. Our Government methods are not perfect, our well organized officialdom still less so, and the masses of the people obtain but few of the benefits of British rule. More than one weak spot is disclosed in pleasantly trenchant fashion in these and other chapters by the author, and what he says deserves to be widely read and well weighed. He says.:—

"Some Governments, never testing the honesty and moral worth of men, give all employments to those who pass an examination in knowledge."

But it is not so in the model state ruled over by Gnanambal.

"In our Government Colleges since only a few secular subjects are taught,

the students become materialists or atheists. As soon as they obtain employment they do every evil thing to get money, counting it as their God. By the laws of the English Government both the givers and receivers of bribes are punished. To bribe-receivers can there be a more favourable law than this? No one willingly bribes officials; because of their oppression people bribe them, as men hand the keys of their treasure to the thief afraid lest he murder them. As the proverb says, 'the Government egg will break the ryot's grindstone,' so the official has many opportunities of ruining those whom he dislikes. Whoever does not give a bribe to the habitual bribe-taker, becomes his bitter enemy. Since the official destroys all his cases, and seeks occasions by false charges to destroy him, clients bribe him to gain his favour. No one bribes willingly, it is only from oppression like this that men give bribes. Therefore if it be right to punish men who give bribes, from such a reason, it is also right to punish those who give of their substance to thieves because they cannot bear to be beaten. Since according to the English Government, punishment is appointed to the givers of bribes, no one ventures to bring a complaint, or if any one be so bold as to do this, it is hard to obtain witnesses against officials. If the charge of bribery be not proved by the complainant, besides being punished for the crime of bringing a false charge, he becomes a fit object of official hatred. In this way, since there are many expedients for the receivers of bribes, they plunder fearlessly as if they had written authority to do so." (p. 248.)

To make their state a model one, the heroine and her husband found many reforms necessary. They found that previously many kinds of work had been given to one man. This was changed. And "since every cutcherry was twenty and thirty miles distant it was difficult for people to go so far to obtain justice." This also they remedied by establishing cutcherries nearer to each other. Official salaries had been too large, and the people in consequence were burdened not only by taxes on houses and land, but by taxes imposed without the semblance of justice; *e.g*, wind tax, light tax, cattle tax, road tax, wedding tax, trouble tax, also a birth and death tax. All taxes were abolished save those on houses and lands. The tax on petitions was abolished so that the poorest might have a chance of obtaining justice. By a series of generous and remarkable reforms, the country was raised to a state of contentment and great prosperity. In all these, it should be said that Gnanambal, the wife of our hero, was the chief actor. How she came—disguised as a man, to play the part of a Maharajah is well told by the author. At last however her ministers becoming anxious that she should take as wife the daughter of the previous rajah, she and Prathapa Muthaliar, her husband seek refuge in flight.

Thus the story runs on to its close, revealing much of that social Hindu life into which it is so hard for the outsider to enter, and unfolding a tale which absorbs the attention of the reader. We frankly confess that when we read the passage describing the death of Gnanambal and the

subsequent grief we felt a dimness of the eyes, and we are of opinion that few could read that passage without being deeply moved. But this work not only displays the ability of the writer, it is calculated to be truly useful to its readers, in breaking the power of superstition, in creating a healthy moral sentiment, and in stimulating them to study and form for themselves opinions upon many important questions. In short every one should be better for having read it. The author is a true patriot as may be seen from the chapter on the "The Decline of the Vernaculars," and "The preciousness of Tamil." He laughs heartily, and anon writes scathingly of those Hindus, vakeels and others who do not know, and are unable to speak their own language.

With the following passage from the above chapter we conclude.

"Just as this Tamil country, filled with numberless temples, agraharams, food choultries, noble rivers and tanks, fertile lands, and culture, and religion is better than other lands, so all agree that the Tamil language is the most excellent of all. Dare we then slight our queenly Tamil, which was born of Agastyar, which was nursed on the Aryan bosom, which won the friendship of all the Dravidian tongues, which dwelt on the lips of the Madura Sangam, and which has danced in the speech of learned men, which has ever been the sole monarch in the Dravidian country? Tamil gave birth to us. Tamil reared us. In our infancy Tamil sang to us and hushed us to sleep. Tamil gladdened our father and mother by our infant speech. The first words which we lisped in childhood were Tamil. Tamil was mixed with the milk which our mothers gave us. What mother, father, guru and others taught from the beginning was Tamil. What our forefathers spoke and wrote from the beginning was Tamil. What our fathers and mothers, relatives and friends now speak is Tamil. Tamil is the language of our homes. Tamil is the language of our country. For students to forsake a language so precious, for Sanscrit, Latin, and such like foreign tongues, is as if they should prefer strangers to their own friends."

## *NOTES AND EXTRACTS.*

The following report from the Assistant Police Superintendent at Baliguda, gives an account of a form of trial by ordeal not often witnessed nowadays.

"I witnessed a curious ceremony to-day. Civil claims in regard to land are sometimes settled by the parties concerned taking an oath, which I will describe as I saw it gone through this morning.

An old Khond claimed certain lands from three other Khonds, and they agreed to settle their disputes by taking what is called 'Sidre Sarada' or the water oath. This consists in sitting immersed in water, and the man who can remain in this position longest gains the day.

The spot where this judicial proceeding took place is about a mile from Udayagiri, at a pool of water supposed to be the abode of one of the numerous Khond gods; the water in the pool is about 5 feet deep.

Each party concerned brought with him to this place a couple of eggs, some rice carried on a couple of leaves and a brass lota full of milk.

A Khond priest, who is paid one rupee by each of the litigants, commenced proceedings by taking one egg and one leaf with rice thereon from the plaintiff and the same from each of the defendants; he then removed himself to the jungle to offer up prayers and these offerings to the water god; meantime, plaintiff and defendants have bathed and each has cut for himself a stick about six feet long. The priest had by this time returned; the plaintiff and one defendant then walked into the water followed by the priest and his assistant, whose duties it is to hold the sticks, one in each hand, in an upright position, planting the ends firmly into the bottom of the pool. The plaintiff then enumerated the boundaries of the land he claimed and the grounds on which he based his claim; the priest, repeating plaintiff's statement, invoked the water god and prayed that, if his statement was true, water should not suffocate him. Defendant made a similar statement to that made by the plaintiff and his reasons for saying the land was his. The priest again supplicated the god on his behalf. Each party then dropped an egg and the rice carried on a leaf into the water, each seized a stick held by the priest's assistant (in the manner described) with both hands and both disappeared under water. As their heads went under, the priest poured milk over them from the two brass lotas, which he held in either hand. After some seconds, the old Khond (plaintiff), very much blown, jumped up suddenly, much in the style of a jack-in-the-box; he had lost his case, and, unlike some decisions given in courts of law, there was no murmuring against this judgment—it was the decision of the god.

The old Khond pleaded his age and the severe test he had to undergo and wished for the postponement of the decisions in the remaining two suits, but the Khond priest, master of the ceremonies, was inexorable, so suit No. 2 was proceeded with, the same forms being observed and proceedings gone through. The old Khond won this case, beating his opponent hollow; he was also successful in suit No. 3."

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The introduction of new or superior kinds of plants into the country is of very great practical importance and of late years much has been done in this direction in Madras, both by the Government and by private individuals. Recently a letter written by Dr. Bonavia to Mr. Gamble, Conservator of Forests, Northern Division, was forwarded to Government, in which he urged that steps should be taken to introduce the Arabian date palm (*Phœnix dactylifera*) into this Presidency. Dr. Bonavia who has introduced it very successfully into the Lucknow gardens, writes :—

"I am satisfied that the date palm is the famine tree for India. It thrives, lives and *luxuriates* when rain is abundant and even tropical, (drainage necessary at the roots) but it gives its *best crop* in times of famine. People think that, because its fruit when ripening rots in the monsoon, it is not suited to this climate. But this year *even rice* rotted in Bengal, and here jowar and indigo rotted, *ergo* these are not suited to this climate! I feel confident that natives will not allow the dates to rot, as they are very good to eat in their unripe 'kharak' stage, yellow or red. Persians live on *kharak* and *fish*."

Government has at once acted on the suggestion and has directed the Board of Revenue to obtain 50 lb. of seed of the best varieties which

will be handed over to the Forest Department to be sown in the most suitable localities. Arrangements are also to be made for obtaining a number of offsets at the proper season for planting.

Another step in the same direction which will meet with universal approval is the sanction given to Mr. Lawson to establish experimental botanical gardens at Gúdalúr and Kuttalám. The object of these gardens, as Mr. Lawson says, is "to discover in what particular districts plants of commercial and other value may best be cultivated, and therefore the localities should differ from one another, as much as possible in temperature, rainfall and character of soil." At present there are experimental gardens at Ootacamund, Coonoor, and Barliyar, under government, and at Madras under the Agri-Horticultural society, all of which have proved most useful. The new sites chosen differ widely in climate from any of the old ones and under Mr. Lawson's able management we may hope to obtain many valuable results from them.

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We have elsewhere referred to Colonel Olcott's defence of Madame Blavatsky at the Anniversary Meeting of the Theosophical Society. As many of our readers may not have the opportunity of seeing it, and as it is sure to prove amusing, if not instructive, we reprint it from the January number of the Theosophist.

"With all else so bright and encouraging on this Tenth Anniversary, there is one thing saddening—sadder to me than to any of you—the absence of my colleague and co-founder, Madame Blavatsky. Could we but have her dear, familiar face here and be able to listen to her well-known voice, the sunshine would almost seem brighter. But she is far away beyond seas, an invalid slowly recovering her strength so as to be able to come once more and resume her place by our side. But not idle, though away, not absent save in body. In distant Germany, the Western Aryavarta of Sanscrit learning, she is diligently working as health and reviving strength permit, upon her new work "The Secret Doctrine," which promises to be even a greater proof of her erudition and ability than "Isis Unveiled." She has already finished the Introduction and three chapters, and hopes to live to complete what you will all agree will be her noblest monument for us to pass down to succeeding ages. How direful a spectacle, is it not, that the age and learning, the many long years of enthusiastic philanthropic work of this marvellous woman, could not have protected her from the persecutions of her enemies! The spectacle of this willing servant of the Mahatmas sitting day and night at her desk, without hope or prospect of worldly benefit, to expound the ancient philosophy of the Rishis and show us the path to salvation, while backbiters and slanderers are doing their best to polute her memory and blacken her character, is enough to make one have a poor opinion of humanity. Charges affecting not only her

honesty and veracity but even her moral conduct have been circulated throughout the world. If she had been the most hardened criminal they could scarcely have been more unsparing in their abuse. To no avail she has over and over again established her good character by even official documentary evidence; as soon as one slander was refuted another was set afloat. And yet, throughout all these years of persecution, no one has shown that she had any motive for the sort of conduct ascribed to her: she was neither promoting schemes for money-getting nor securing ease and comfort to herself. Quite the contrary; it is notorious that she has been persistently spending money, putting up with often great discomforts and even perils, taking no end of trouble, and doing an amount of hard work that few men, let alone women, could get through. I never could understand the sort of fatality which accompanies her in respect of the malignant opposition she seems to stir up. I have been associated with her, as you know, since the Autumn of 1874, and have had more experience in this direction than any one; I have seen this phenomenon from the first. The time has come, I think, for me to break the silence I have maintained since the explosion of the Madras conspiracy of last year; at least so far as to point to the above noted facts and leave you to make your own deductions therefrom. A year-and-a-quarter has elapsed since the attack was made upon her in the local missionary organ, and really one accustomed to weigh evidence must say that no sufficient case has been made out against Madame Blavatsky: certainly none that would weigh with anybody who knew what her actual powers, learning, and motives of action are. All of us her older associates would not hesitate one moment to accept her bare denial of the infamous charges, that appeared in the *Times* on the day after the Calcutta telegram reciting them was printed in that journal, as against the accusers, whether male or female, French, Anglo-Indian, or English, when backed by such evidence as they have brought forward. If she was the unmitigated trickster alleged I should have been the first to know it, and must have been her accomplice. Some, after vainly trying to impeach my own character, have put forth the paltry theory that my integrity is saved at the expense of my intelligence; in short, that if not a knave I must be a perfect fool! But my past career proves me to have been neither the one nor the other; and so my only reply to these unworthy and dishonest aspersions is a silent contempt too deep for words. Madame Blavatsky and I know that there is a judgment that will be absolutely just, the law of Karma, and it is a matter of perfect indifference to me what may be said of us—or, for that matter, done to us—by persons who bring charges without caring to know whether or not they are true, and then try to support them by imputations of a scandalous nature. We undertook a certain public work ten years ago, and it will need more than such puny conspirators as these can do to

stop us. Many have clamoured that she should arraign her accusers in the law courts, but after seeing how Dr. Slade and, latterly, the heroic editor of the *Pall Mall Gazette*, have fared, it would be the maddest folly to expect that one so hated as she by the average conservative would have even a show of justice. And now this is all I have to remark upon this subject, which I should not have even touched upon but for the peculiar circumstances attached to the present anniversary occasion. Madame Blavatsky, by the advice of her medical attendant, Dr. Mary Scharlieb, sailed for Europe on the 2nd of April last, being so helpless at the time that she had to be carried to the carriage, from the carriage to the masulah boat, and from the boat hoisted in an invalid chair to the deck of the steamer. Her heart was so bad that I was warned that if we kept her here she might drop dead at any moment under sudden excitement. She is much better now, but still under constant medical treatment. When she has recovered strength enough to withstand the further persecutions that I have positive proof are awaiting her, I shall try to bring her back, and I hope this may be before our next anniversary, though of course I cannot be even certain that she will then be alive. It is a most gratifying fact that there are visible signs of a reaction in her favour in various directions, while—if that were possible—the regard felt towards her by members of our Society, especially by those in Europe, is greater than before. No one—I least of all—would say that Madame Blavatsky is free from faults or that she may not have some very noticeable ones; but we do say that, feeling how very far from perfect and blameless each of us also is, we would excuse even greater ones for the love we bear a benefactress who has shown us a Path where the Light always shines."

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## SCIENCE JOTTINGS.

Though somewhat late, we cannot pass over the death of Dr. Thomas Andrews of Belfast without some notice of his life and work. He was born in Belfast in 1813 and received his early education there. From the Royal Academical Institution of Belfast he went to Glasgow where he studied chemistry under Prof. Thomas Thomson and passed through a course of practical chemistry in his laboratory. From Glasgow he went to Trinity College, Dublin, where he distinguished himself in both classics and science. He spent some time in Dumas' laboratory in Paris and finally took his degree in Medicine in Edinburgh in 1835. Returning to Belfast he became a successful Medical practitioner, but continued to work at science in his spare time. He was the first lecturer on chemistry in the Royal Belfast Academical Institution and held this

lecturership till he was appointed vice president of the newly instituted "Northern College" which afterwards became Queen's College, Belfast. He was most successful as a professor gathering large and enthusiastic classes both for general theoretical and for practical chemistry. The time not spent with his classes was devoted to scientific research in his private laboratory. He was elected a Fellow of the Royal Society in 1849, but before that, in 1844, he had obtained one of the Royal Medals for his scientific work. The three researches with which his name will longest remain connected are those on the heat evolved during chemical action, ozone, and the continuity between the liquid and gaseous states of matter. His researches on ozone, partly carried on along with Prof. Tait, led to the discovery of the true constitution of that body. The experiments were remarkable alike for their simplicity and conclusiveness, and the writer can well remember the pleasure with which he saw them repeated by Prof. Andrews in a lecture before the Royal Society of Edinburgh. The investigation of the conditions under which gases were liquified led to the most important discovery of what is known as the "critical point" or "critical temperature" of gases. It would take too much space to go into any details on this subject, but we may point out that one part of the discovery was that if the temperature of a gas is above the critical point no pressure however great can liquify it, while if it is below that temperature it can always be liquified by a sufficiently great pressure. This discovery naturally pointed out the way by which the so-called permanent gases could be liquified, for these had low critical points below which they had to be cooled before they could possibly be liquified. The path thus pointed out soon led to the triumphs of Cailletet and Pictet, who were able at the close of 1877 to announce that the last of the "permanent gases" had yielded to the action of combined cold and pressure. The scientific world was not slow to appreciate Andrews' merit, and distinctions of all kinds were showered upon him from at home and abroad. He was President of the British Association at the Glasgow meeting in 1876, but even before that time his health had sadly failed, and in 1879 he resigned his professorship and thereafter led a very retired life. He died on the 26th of November last.

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The great refractor of 30 inches aperture in the Pulkowa observatory is now ready for use. Considerable delay has been caused by difficulties connected with the huge dome required for so large an instrument. The dome, as at present arranged, is moved by hand, but it is proposed to use an electric motor for this purpose hereafter. The object glass was made by Messrs. Alvan Clark and Sons, the famous American opticians and has proved most satisfactory. So satisfactory indeed is it that the Emperor of Russia has conferred on Mr. Clark the Honorary Gold Medal of the

Empire. The mounting of the telescope has been designed and executed by the Repsolds.

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The following table shows the mean Meteorological conditions of several stations in different parts of India for the month of February.

| Station. | At 10 A. M. Barometer. Inches. | At 10 A. M. Thermometer. F° | At 10 A. M. Humidity. Percentage of Saturation. | Resultant wind direction of the month and percentage of prevalence. | Wind velocity of the month. Miles per hour. | Rainfall of the month. Inches. |
|---|---|---|---|---|---|---|
| Delhi ... ... ... | 30·068 | 64·6 | 51 | 39 N. 66° W. | 3·6 | 0·53 |
| Allahabad ... ... | ·066 | 69·4 | 50 | 25 N. 66° W. | 2·3 | 0·43 |
| Silchar ... ... | ·065 | 69·2 | 72 | 25 S. 33° E. | 2·8 | 2·65 |
| Darjeeling ... ... | 22·977 | 44·4 | 70 | 34 S. 74° W. | ? | 1·20 |
| Dacca ... ... | 30·030 | 75·0 | 59 | 35 S. 76° W. | 2·7 | 0·99 |
| Calcutta ... ... | ·051 | 73·2 | 63 | 23 S. 81° W. | 3·9 | 1·61 |
| Nagpore ... ... | ·046 | 77·9 | 36 | 17 N. 55° E. | 3·6 | 0·41 |
| Indore ... ... | ·050 | 73·8 | 28 | 10 N. 1° E. | 3·1 | 0·28 |
| Jeypore ... ... | ·083 | 70·1 | 39 | 31 N. 6° W. | 4·8 | 0·18 |
| Kurrachee ... ... | ·086 | 71·3 | 50 | 23 N. 61° W. | 10·6 | 0·27 |
| Bombay ... ... | ·030 | 77·8 | 62 | 58 N. 14° W. | 10·7 | 0·02 |
| Poona ... ... | ·035 | 78·0 | 30 | 21 N. 28° W. | 6·6 | 0·04 |
| Belgaum ... ... | ·017 | 79·3 | 30 | 23 S. 78° W. | 3·5 | 0·02 |
| Secunderabad ... | ·062 | 78·9 | 40 | 50 S. 74° E. | 3·4 | 0·23 |
| Vizagapatam ... | ·053 | 79·5 | 62 | 43 S. 11° W. | 2·1 | 0·29 |
| Bellary ... ... | ·023 | 82·1 | 36 | 54 S. 56° E. | 3·5 | 0·04 |
| Madras ... ... | ·053 | 82·4 | 60 | 68 E. | 5·1 | 0·30 |
| Salem ... ... | ·078 | 81·9 | 52 | 49 S. 79° E. | 6·0 | 0·08 |
| Wellington ... ... | 24·309 | 65·1 | 45 | 64 S. 12° E. | ? | 0·36 |
| Coimbatore ... ... | 30·056 | 78·6 | 56 | 74 N. 82° E. | 3·3 | 0·13 |
| Trichinopoly ... ... | ·065 | 81·8 | 58 | 74 N. 65° E. | 4·2 | 0·54 |
| Negapatam ... ... | ·043 | 81·6 | 63 | 79 N. 65° E. | 3·7 | 0·78 |
| Cochin ... ... | ·013 | 84·0 | 62 | 26 S. 74° W. | ? | 0·76 |
| Mercara ... ... | 29·988 | 71·9 | 53 | 38 N. 65° E. | 4·1 | 0·04 |
| Bangalore ... ... | 30·026 | 75·3 | 46 | 66 S. 67° E. | 3·3 | 0·15 |
| Colombo ... ... | 29·988 | 81·7 | 73 | 46 N. 39° W. | 5·7 | 1·87 |
| Rangoon ... ... | 30·032 | 80·0 | 60 | 16 S. 56° W. | 4·2 | 0·04 |

*Note.*—The barometer readings are reduced to 32° F. and, except for Darjeeling and Wellington, are all reduced to sea level.

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Mr. Lockyer has recently submitted to the Royal Society an account of a new form of spectroscope specially suited for solar work. Some time ago he showed that different spots showed differences in the behaviour of the lines belonging to the same element, and that hence it was most important to be able to make comparisons simultaneously over a considerable length of the spectrum. He has now shown that this can be done by using a grating which has been cut in half, the one part being moveable relatively to the other. By this means it is possible to examine *e.g.*, C. and F. at the same time. The method is certainly a simple one, and for the purpose for which it is designed ought to be effective. It can evidently also be adapted to the purpose of measuring the position of lines.

Should future intelligence confirm the following account of the fall of a large meteor in America it must be accepted as the most remarkable on record. We quote from *Nature*.

"American papers state that an aërolite or meteoric stone, which caused a loud detonation, heard throughout the greater part of Washington and Alleghany counties, Pa., on Saturday, the 3rd inst., fell upon the farm of Mr. Buckland, in Jefferson township, Washington County, near the West Virginia line. A mail carrier states that looking up he saw, moving high above him, a huge mass, which he described as resembling a great coal of fire as large as the largest barn he ever saw. There appeared to be attached to it an immense flame of a deep red colour, which tapered off into a darker tail. Instantly the noise which accompanied it ceased; the fire-like appearance, the flame, and the tail disappeared, and in their stead the stone assumed a whitish hue, which it retained until it passed out of sight. When the stone fell it broke into three pieces, but did not penetrate the earth to any great depth, as two-thirds of it remained above ground. It is grayish in colour, with a succession of red streaks, is irregular in form, and at least fifty feet in diameter."

C. M. S.

## RECENT PERIODICAL LITERATURE.

*Fortnightly Review.* Under the heading of *Æsculapia Victrix* Mr. R. Wilson gives an interesting review of the origin and progress of female medical education. The history is not yet a long one, for as Mr. Wilson says, "it is little more than ten years since the mere suggestion that a woman might be encouraged to practise medicine simply horrified decent people." The article is mainly taken up with the history of the London School of Medicine, but the writer points out that the history of the movement in favour of the medical education of women does not begin with the founding of that School. In 1864 an attempt was made by Dr. Edmunds to train a superior order of midwives, but as the scheme did not aim at giving women so thorough a training as that prescribed by law and custom for medical men it aroused no public enthusiasm. When this attempt failed, Miss Jex Blake in 1869 induced the Court of Edinburgh University to allow herself and some other ladies to matriculate in the University. Things appear to have gone on smoothly until it became evident that the ladies showed by their ability and zeal not only that they meant to graduate but also that they were certain to pass the examinations. Thereupon a legal objection to their position was raised by a powerful party among the professors, and a decision of the Court of Session finally prevented them from finishing their course. Miss Blake and her fellow students were not, however, discouraged by the treatment they had received at the hand of the Edinburgh University authorities and they accordingly removed to London.

They at once gained the support of Mrs. Garrett Anderson, M. D., whose idea was that some of the existing institutions should be utilized for teaching medicine to women. This was found to be impracticable, and Mrs. Thorne suggested that medical women should set up in London a College for themselves. This view was adopted by Miss Blake and the ladies who acted with her, and they were fortunate in obtaining the sympathy of Dr. Anstie whose social qualities, scientific and literary abilities and professional skill gave him just the kind of influence which would be of the greatest value in forwarding their cause. With the assistance of some other gentlemen he organised the School in

Henrietta Street of which he was unanimously appointed dean. His idea was to get the school recognized as one which would qualify students for Medical Examinations, and with this view lecturers were appointed who already held high places in recognized Schools. Dr. Anstie died before the School was opened and he was succeeded as dean by Mr. A. T. Norton whose place was last year filled by Mrs Garrett Anderson. At first there was no Honorary Secretary, Miss Blake performing the duties of the office without the name. In 1877 she settled in practice in Edinburgh, and Mrs Thorne was appointed to succeed her. The school is an illustration of what earnest people can accomplish with small resources, for as Mr. Wilson points out it was started on little more than £ 1,000.

So far the movement had prospered, but new difficulties were met at the very outset of the school's career. "Every application for the admission of its students to the wards of a qualifying hospital failed, and the licensing bodies refused to recognize the school or examine its alumni. No licensing body would even examine them when they had attended the required hospital practice elsewhere than in Great Britain." But Miss Blake's courage did not even then fail her, and it kept the school open when otherwise it would have probably been closed in despair. Some little practice was obtained at the New Hospital for women and Dr. Chambers gave the ladies free admittance to the wards under his control in a similar institution in Chelsea. And in 1877 arrangements were made to admit lady students to the wards of the Royal Free Hospital in Gray's Inn Road on condition that the School paid the Hospital £315 and the Medical Staff £400 a year for five years." In 1876 a bill was passed enabling British licensing bodies to confer diplomas on women, and thus the other difficulty—admission to qualifying examinations—was removed. In 1878 the convocation of London University approved a charter admitting women to all its degrees.

After this the School may be said to have obtained a secure footing, the only difficulty thereafter being the financial support of the institution. But by means of fees, subscriptions promised in 1877 and private legacies, the Managers have been able to clear their way, and the School prospers. Since the institution was opened in 1874 one hundred and fifty students have been admitted. Forty-one of these now hold diplomas from the King and Queen's Colleges in Ireland, and of thirteen students who have been sent to the Examinations of the University of London two have taken gold medals and five have graduated in honours.

Mr. Wilson gives examples of the good work that many lady doctors are doing throughout the world. We need only refer to Mrs. Scharlieb, an old student of the Henrietta Street School and an M. B. and B. S. of London whose work in the College and town of Madras requires only to be mentioned in this Magazine. With regard to the field for medical women Mr. Wilson thinks that, though there is every chance of succeeding in large towns, there is little chance of their becoming self-supporting in rural districts. Whatever may be thought with regard to this or with regard to the usefulness of medical women at home, there can be no doubt but a great field lies open for them in India. For so long as the laws and customs of this country are as they are it is to women that the women of India must look for help. This is now being recognised both in India and at home, and every one who has the cause of India at heart will wish all success to the great scheme which Lady Dufferin has recently organised.

As to the demoralizing effect which it was thought the study of medicine would have on women, Mr. Wilson has nothing to fear "We cannot be too cautious," he says, "about discouraging gifted women from making the most of whatever capacities they may have, especially if they are guided by pure aims, high ambitions and cultivated intelligence. Humanity wins nothing by forcing those who cannot entirely fill their lives with family interests, to crush their cravings for other activities, unless, indeed, these be in themselves demoralizing. But no educated and unprejudiced person nowadays believes that medical practice or study must necessarily demoralise a lady. The service of the sick has in all ages had a strange but seemingly natural

fascination for women, and it is simply contrary to common-sense to suppose that a woman must needs be unsexed by such service, unless it be utterly divorced from scholarly culture and scientific knowledge." And appealing to fact as most clear-eyed men see it, he says that "for eleven years ladies have been studying and practising medicine in England encouraged by a great deal of popular patronage, but without in any degree forfeiting respect in Society as daughters, wives, and mothers, or displaying the least trace of deterioration in the finer qualities of mind or heart."

*The Nineteenth Century* for January opens with an article, by Mr. Gladstone entitled "Proem to Genesis : a plea for a fair trial." The article contains a reply to the objections brought by Professor Huxley against the position taken up by the author in the November number of the Magazine, in his article "The Dawn of Creation and of Worship." After commenting unfavourably on the *method* of Professor Huxley, Mr. Gladstone passes on to consider the main point at issue between himself and his opponent, whether the four-fold succession of animal life presented to us in Genesis is or is not in accordance with the most recent findings of science. In spite of the emphatic denial with which Professor Huxley had answered the question, Mr. Gladstone adheres to his former assertion. The question, he says, turns upon a comparison between the probable meaning of the Proem to Genesis and the results of geological science. As to the latter term of the comparison, no one can gainsay Professor Huxley's right to speak with authority. But

"It is not enough to be accurate in one term of a comparison, unless we are accurate in both. A master of English may speak the vilest and most blundering French. I do not think that Mr. Huxley has even endeavoured to understand what is the idea, what is the intention, which his opponent ascribes to the Mosaic writer; or what is the conception which his opponent forms of the weighty word Revelation. He holds the writer responsible for scientific precision. I look for nothing of the kind, but assign to him a statement general, which admits exceptions; popular, which aims mainly at producing moral impression; summary, which cannot but be open to more or less of criticism in detail. He thinks it is a lecture I think it is a sermon. He describes living creatures by structure. The Mosaic writer describes them by *habitat*. Both I suppose are right. I suppose that description by *habitat* would be unavailing for the purposes of science. I feel sure that description by structure, such as the geologists supply, would have been unavailing for the purpose of summary teach ing with religious aim."

Having thus indicated the point of view from which the statements of Genesis may fairly claim to be judged, Mr. Gladstone proceeds to the second term of the comparison, and asks how far these statements are in accordance with the teachings of geological science. For the terms water, air and land population which he had used in his first article, he substitutes those of fishes, birds, mammals and man, as conveying more accurately the idea of the writer in Genesis. In favour of this fourfold succession he had in his previous article claimed a consensus of scientific opinion. Professor Huxley however denies the existence of such a consensus and believes for his own part that the relative positions of birds and mammals must be reversed. To such an expression of opinion Mr. Gladstone pays deference so far as to renounce the attempt to profit by a *consensus* of geologists.

"As one probable doctor sufficed to make an opinion probable, so the dissent of this eminent man would of itself overthrow and pulverise my proposition that there was a scientific *consensus* as to a sequence like that of Genesis in the production of animal life as between fishes, birds, mammals, and man."

With this, and with the farther remark that even if the priority of mammals to birds be accepted as proved, it still constitutes but a small exception to the mass of agreement that has been established, Professor Huxley is set aside; and Mr. Gladstone goes on to appeal to the most recent geological authorities in favour of his contention that the statements of the Book of Genesis as to the succession of life on the globe are substantially at one with the most recent findings of science. After adducing the statements of his authorities, he continues:—

"It will now, I hope, be observed that

according to the probable intention of the Mosaic writer, these five orders [plants, fishes, birds, mammals, man] enumerated by him correspond with the state of geological knowledge, presented to us by the most recent authorities in this sense; that the origins of these orders respectively have the same succession as is assigned in Genesis, to those representatives of the orders which alone were probably known to the experience of Adamic man."

The points wherein the record of Genesis is either incomplete or at variance with the teachings of science may be explained by a reference to the peculiar stand-point of the writer; for example it omits all mention of the great periods of invertebrate life lying between plants and fishes: and again it passes by the great age of Reptiles with their antecessors, the *Amphibia* which come between fishes and birds. But these omissions, enormous with reference to the scientific record, are completely in harmony with the probable aims of the Mosaic writer as embracing only the formation of the objects and creatures with which early man was conversant. Reptiles however are not simply omitted from their proper place; they are mentioned as contemporary with mammals.

"But the relative significance of the several orders evidently affected the method of the Mosaic writer. Agreeably to this idea, insects are not named at all. So reptiles were a family fallen from greatness; instead of stamping on a great period of life its leading character, they merely skulked upon the earth . . . Lying outside both the use and the dominion of man and far less within his probable notice, they are not wholly omitted like insects, but treated apparently in a loose manner as not one of the main features which the writer meant to draw."

Referring in conclusion to Professor Huxley's remarks upon the relation between Theology and Religion, Mr. Gladstone takes the opportunity of entering an energetic protest against the prevalent fashion of treating theology with an affectation of contempt:—

"Those who take for the burden of their song 'Respect Religion but despise Theology' seem to me just as rational as if a person were to say 'admire the trees, the plants, the flowers, the sun, moon or stars, but despise Botany or despise Astronomy.' Theology is ordered knowledge; representing in the region of the intellect what religion represents in the heart and life of man. And this religion, Mr. Huxley says a little farther on, is summed up in the terms of the prophet Micah (vi. 8); 'Do justly and love mercy, and walk humbly with thy God.' I forbear to enquire whether every addition to this—such, for instance, as the Beatitudes—is to be proscribed. But I will not dispute that in these words is conveyed the true ideal of religious discipline and attainment . . . Still I cannot help being struck with the impression that Mr. Huxley appears to cite these terms of Micah, as if they reduced the work of religion from a difficult to a very easy performance. But look at them again, examine them well. They are in truth in Cowper's words:—

> Higher than the heights above
> Deeper than the depths beneath.

Do justly, that is to say, extinguish self; love mercy, cut utterly away all the pride and wrath and all the cupidity that make this fair world a wilderness; walk humbly with thy God, take His Will and set it in the place where thine own was used to rule. 'Ring out the old, ring in the new.' Pluck down the tyrant from his place; set up the true Master on His lawful throne.

There are certainly human beings of happy composition, who mount these airy heights with elastic step, and with unbated breath.

> Sponte suâ, sine lege, fidem rectum —
> que colebat.

This comparative refinement of nature in some may even lead them to undervalue the stores of that rich armoury, which Christianity has provided to equip us for our great life-battle. The text of the prophet Micah, developed into all the breadth of St. Paul and St. Augustine, is not too much—is it not often all too little?—for the needs of ordinary men."

*The Indian Evangelical Review*—under the Editorship of the Rev. K. S. Macdonald—is well known in India as a thoughtful and well conducted Magazine, in which all subjects of special interest in Educational and Missionary work are fairly discussed. The current number is made up of seven Articles, which are followed by a few pages of "Notices of Books" and a "Review of 1885." The opening article, by the Rev. W. Hooper, C. M. S., Allahabad, treats of the best way of presenting the Gospel to Muhammadans. The next, on *Educational Missions*, is a reprint of the report issued by the Deputation sent by the Assembly of the Church of

Scotland to enquire into the nature and methods of the Missionary work carried on by their Agents in India This is followed by a short but somewhat original paper on the question, *Who are the Deacons and Elders of Christian Churches?* Mr. Bruce of Satara, contributes the first of what appears to give promise of being a careful series of papers on the *Natural History of the Marathi Bible*, while Mr. Milne of Calcutta gives an interesting account of the various changes effected in the Revision of the Old Testament. The remaining articles are on "*The independence of the Native Church in India*," by Rev. T. Evans, and "*Our Lieutenant-Governor's Book*," a long and able review of Sir Alfred Lyall's "*Asiatic Studies*," by Ram Chandra Bose, Lucknow.

We have much pleasure in observing how the *Review* continues to hold its own as one of the leading Indian Magazines. It is under good management and preserves a healthy and Catholic spirit. The place it occupies is one of considerable importance, and the number before us gives ample evidence that it is in no way inferior in strength and in interesting matter to its earlier numbers.

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## *QUERIES.*

(*Continued from our last issue.*)

A LOVER OF TRUTH.

*Kindly give briefly the opinions held on the following subjects:*

(5.) *The origin of simple Perception.*

We suppose that our correspondent wishes us to give the different views that are held with regard to the origin of the faculty of External Perception. Before doing so, however, we would remark on the inapplicability of the term 'simple' as applied to perception. No doubt one perception may be less complex than another, but no act of perception, or cognition of any kind, is really simple. Having made this remark we shall now state the different views. One view is that the faculty of perception is innate. The individual human being is born with the power of perception. Another view is that the power of perception is acquired. The individual learns to group together and to objectify his sensations. A third view is that the power of perception, while acquired by the race, is inherited by the individual.

(6.) *Logical Thinking and the origin of Language.*

As our correspondent has omitted to specify the point on which he desires information regarding logical thinking, we are unable to answer that part of his question. We pass on, therefore, to the latter part of it. We believe there are three well-marked views regarding the origin of language.

(1) One view is that language was originally a convention. Human beings finding a need for greater facility of communication with one another laid their heads together and invented a language. This view which was implied, if not expressly taught, by Locke, Stewart, &c., is now we believe obsolete. (2) Another view is that language was at first communicated by Divine Revelation. God taught our first human progenitors a language. It is supposed that this view derives some countenance from the Bible; but this we believe is a mistake. In *Genesis* Ch. 2, v. 19, we read: "And out of the ground the Lord God formed every beast of the field, and every fowl of the air and brought them to the man to see what he would call them; and whatsoever the man called every living creature, that was the name thereof." Now this passage seems clearly to teach, in more or less figurative language, that naming, which is the fundamental function of language, is natural to man. (3) The view that is now generally adopted is that language is the spontaneous product of human nature. Human beings speak as naturally as they think. Indeed, thought could never have advanced beyond the most rudimentary stage without language. Of course there are subordinate questions connected with the origin of language,

such *e. g.* as whether language was originally onomatopoetic or interjectional, &c. These, however, we need not enter on.

(7). *Free will.*

In connection with the human will, J. S. Mill mentions three theories, *viz.*, *Fatalism*, *Determinism*, and *Liberty*. Fatalism teaches that the course of events is predetermined by some mysterious power, and that, however we may will and strive against this, it will come about all the same. This is not properly speaking a theory of volition at all. Determinism teaches that our will is always determined by the present, or if there are more than one, the strongest present motive. Further that our motives are determined by antecedent circumstances, as our surroundings, character, &c. In every case, therefore, in which one wills, there is only one possible alternative. He could not will otherwise than he actually does. The Free-will doctrine, on the other hand, teaches that, although one never performs an act of volition without a motive, yet in willing he freely chooses the motive, and that when he wills in one way it is open to him to will in another way. Motives are the reasons but not the causes of our volitions. Determinists base their doctrine on the law of causation and the uniformity of nature. Free-willists base theirs on consciousness and the conviction of responsibility.

M. SURYANARAYANA.

Mr. Suryanarayana is not satisfied with the answer we gave in our last issue to his question, why *Kaseekhandam* had been selected as a Telugu text and whether the Syndicate of the University might not, in response to the representations of students, substitute something else. He says: "The merit of the book is somewhat analagous to the following. Let the whole of *Leviticus* of the Bible be thrown into English verse by a man who has already attained fame by a translation of a great work, say Homer's great epic poem. Let then this *Leviticus* in English verse be the English text book for the B. A. examination. I think *Kaseekhandam* as a Telugu text book will have claims no better than that." Well this does not strike us as anything very terrible after all. We can imagine the book of *Leviticus* translated into verse in such a way as to make it a great poem. The marvels that poetic genius can produce from the most unlikely materials are well known. For example, the catalogue of the Greek and Trojan forces at the siege of Troy, in the Second Book of the *Iliad*, and the *Georgics* of Virgil, although the one is essentially a list of names and geographical and genealogical details and the other deals with such vulgar topics as the breeding and rearing of cattle, and the ploughing and sowing of the fields, have been wrought up by their authors into masterpieces of poetic art. The comparison, therefore, made by our correspondent does not necessarily tell against the suitability of the selection. As to memorialising the Syndicate, no doubt the Syndicate has power to make any alteration in the selected texts, but it would, we imagine, take very weighty reasons indeed to induce them to make a change at this late stage. Besides there is always the risk, as we said, of "going farther and faring worse." Our correspondent says he can make nothing of this expression. Perhaps he would have understood us if we had talked of "out of the frying-pan into the fire." What we meant was that if the Syndicate were to substitute some other text for *Kaseekhandam*, the substitute might turn out to be more objectionable than the original.

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## CORRESPONDENCE.

TO THE EDITOR,
*Christian College Magazine.*

DEAR SIR,

The following is a cutting from the *Ceylon Observer*. I have frequently tried the handkerchief experiment referred to with an ordinary linen handkerchief when the moon, according to

popular phraseology, was three days old, and even four days old, and have seen three or four crescent moons on the day the experiment happened to be made. The crescents are not so distinctly visible on the fourth day as they are on the third. I should feel obliged if you would favour me with an explanation of the results of the experiments mentioned in the extract.

"While admiring the starry heavens, one of our party brought an ordinary looking-glass, and told us to look up into it for reflections of the crescent moon repeated for each day of her age—the moon being at the base when one end of the glass was used, but reversed when the other end of the glass was placed so as to receive the reflections, which in each case were four. That was on the night of the 13th, but last night we were told to look for five reflections, which, to our great amazement, we beheld in both ends of the glass as before. On retiring to my bedroom, into which the moonlight was shining, I repeated the experiment last night with a different looking-glass and obtained exactly the same result, five reflections of the young moon, running upwards or downwards as one or the other end of the glass was used. When showing the reflections last night to some intelligent Tamils on the estate, they stated that the Mussulmans of Southern India were able to ascertain the moon's age by looking at her through a fine silk handkerchief. By a curious coincidence our people were trying the handkerchief experiment at the lines while we were reading the looking-glass reflections at the bungalow, but the Tamils stated they were not fully successful in consequence of a pure silk handkerchief not being available. We have not tried the handkerchief experiment, but about the looking-glass giving four reflections when the moon was four days old and five on her fifth day there can be no mistake. Of course the looking-glass must be held face downwards, but so inclined as to take in the image of the moon and the line of subsidiary reflections lessening in size as they are further away from the image of the planet. I cannot say whether this curious experiment is mentioned in any book and a scientific or popular explanation given. For myself, the fact being certain of reflections in a looking-glass of the moon, increasing one for each additional day of her age, I am utterly unable to offer or imagine any explanation of it. A piece of glass, with quicksilver on one side of it, can have no occult power. It can only reflect what comes within its focus. But why then did it give quadruple reflections one night, and quintuple the next, the additional reflection corresponding exactly with the additional day in the moon's age? The explanation may be very simple, when given, but at present I can only confess to ignorance and bewilderment."

Yours faithfully,

J. D. W. S.

MADRAS, 23*rd Dec.* 85.

[We held this letter over last month, that we might have the opportunity of actually trying the experiment. The result of the experiment was, as we had expected, that the number of crescents visible depends on the fineness of the handkerchief and on the clearness of the night; in each case we were able to see more than the proper number. The explanation of the phenomenon is that a fine handkerchief acts as a 'grating' and forms a series of spectra of the moon. The number of spectra formed is very great but only a few of them are bright enough to be seen. The number actually seen will depend, other things being equal, on the amount of light and hence will increase with the age of the moon. The explanation of the looking glass experiment is even simpler, the images seen in this case are due to multiple reflections from the two surfaces of the mirror and the number seen will, again, depend on the brightness. This explanation is easily confirmed by testing it on a source of artificial light. A pretty experiment is to try the same with Venus.

Some may still doubt if this explanation is sufficient, to them we would say when the moon is next young count the number of visible images on three successive days and write down the result in each case, taking care to remain in ignorance of the true age of the moon till after the third observation. It will then, we think, be evident that the exact number seen depends to a certain extent on the number expected.—*Editor M. C. C. M.*]